## yonder

## **Artificial Intelligence**

Too early or too late?

Paul Cirstean

Portfolio Managers Focus Group





#### The AI impact on CSI

What disruptions should we anticipate?

#### **Practical AI use cases**

Where can CSI companies capture immediate value?

#### **Successfully adopting AI**

How to prepare your business?



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## a history of hope and hype

#### **1958:** Al is going to change the world!

"We are about to witness the birth of a machine capable of perceiving, recognizing and identifying its surroundings without any human training or control."

- Frank Rosenblatt, Ph.D.

2019: Al is going to change the world!
2020: Al is going to change the world!
2021: Crypto is going to change the world!
2022: ...umm... Al is going to change the world!
2023: Al is going to change the world!
2024: Al is going to change the world!

# WHY NOW?



S

...

O TechSpot

CEO Sundar Pichai says 25% of new code Google creates is written by Al

According to CEO Sundar Pichai, AI is being used to write around 25% of new code at Google. During the company's third-quarter 2024 earnings call.

Oct 30, 2024





For 25% of the Winter 2025 batch, 95% of lines of code are LLM generated.

That's not a typo. The age of vibe coding is here.

TECH

# Mark Zuckerberg says AI could soon do the work of Meta's midlevel engineers

Lakshmi Varanasi Jan 11, 2025, 8:28 PM EET

→ Share □ Save



Competitive programming CodeForces Benchmark Context window size

Number of tokens

Software engineering SWE Benchmark



E. Permutations Harmony

time limit per test: 2 seconds memory limit per test: 256 megabytes

Rayan wants to present a gift to Reyhaneh to win her heart. However, Reyhaneh is particular and will only accept a *k*-harmonic set of permutations.

We define a *k*-harmonic set of permutations as a set of *k* pairwise distinct permutations  $p_1, p_2, ..., p_k$  of size *n* such that for every pair of indices *i* and *j* (where  $1 \le i, j \le n$ ), the following condition holds:

 $p_1[i] + p_2[i] + \dots + p_k[i] = p_1[j] + p_2[j] + \dots + p_k[j]$ 

Your task is to help Rayan by either providing a valid *k*-harmonic set of permutations for given values of *n* and *k* or by determining that such a set does not exist.

We call a sequence of length n a permutation if it contains every integer from 1 to n exactly once.

Input The first line contains a single integer t ( $1 \le t \le 1000$ ), the number of test cases.

Each test case consists of two integers n and k ( $1 \le n, k \le 10^5$ ). The sum of  $n \cdot k$  over all test cases does not exceed  $5 \cdot 10^5$ .

#### Output

For each test case, if a *k*-harmonic set of permutations exists, print YES on the first line. Then, print k lines, each containing a distinct permutation of the integers from 1 to n.

If no such set exists, print NO on the first line.

You can output "YES" and "NO" in any case (for example, strings "yEs", "yes", and "Yes" will be recognized as a positive response).

If multiple answers are possible, you can output any of them.

#### Example input Сору 4 3 3 4 2 5 1 32 output Сору YES 1 2 3 2 3 1 3 1 2 YES 1 2 3 4 4 3 2 1 NO YES 1 2 3 3 2 1

# 1. Competitive programming

#### **CodeForces Benchmark**

## 2024 (GPT 4o)

~900

#### 2025 (o3)

#### Average senior developer: ~1600

Only ±150 developers in the world are better

2727



## 2. Context window size

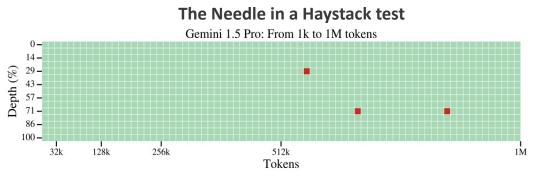
#### Number of tokens (words)



Medium size project (100,000 LoC): ~ 1,000,000 tokens

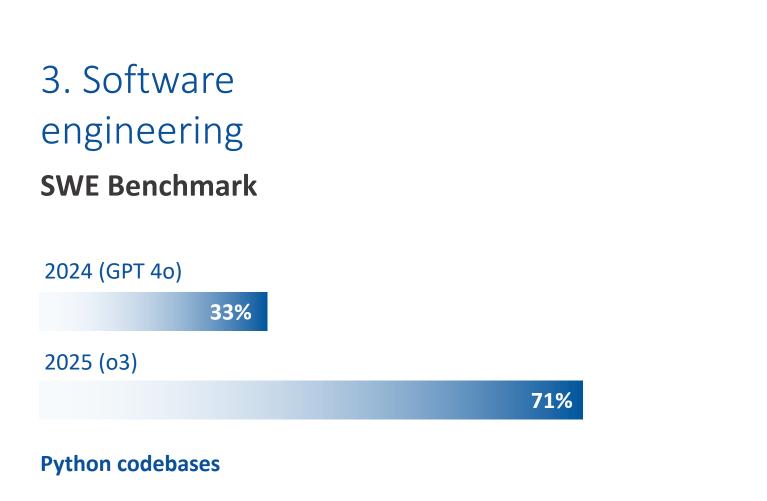
#### Google DeepMind

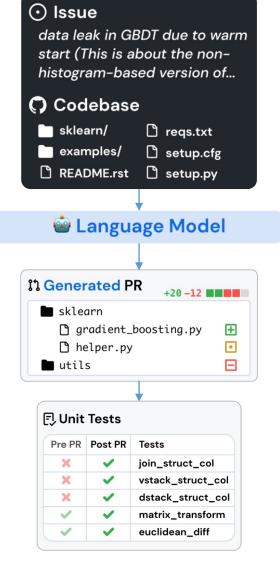
#### Gemini 1.5: Unlocking multimodal understanding across millions of tokens of context



https://arxiv.org/pdf/2403.05530



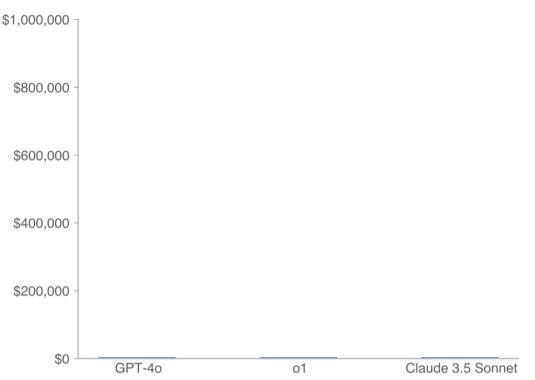




https://arxiv.org/pdf/2310.06770



3. Software engineering **SWE-Lancer** Can frontier LLMs earn \$1 million from real-world freelance software engineering? "We introduce SWE-Lancer, a benchmark of over <u>1,400 freelance software engineering</u> tasks from Upwork, valued at \$1 million USD total in real-world payouts. SWE-Lancer encompasses both independent engineering tasks - ranging from \$50 bug fixes to \$32,000 feature implementations."



https://arxiv.org/pdf/2310.06770



Competitive	Context	Software
programming	window size	engineering
CodeForces Benchmark	Number of tokens	SWE Benchmark

Are the models going to get even better? How is this going to impact CSI companies? Are we ready for what's about to come?

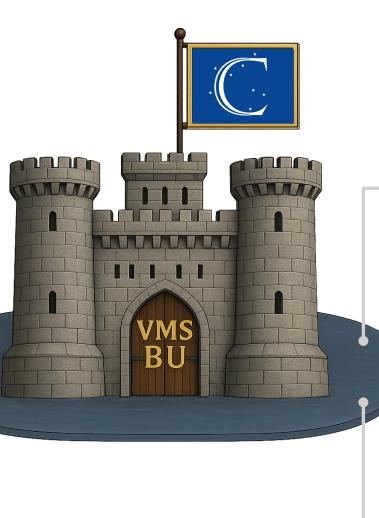


#### **Time to build**

AI drastically cuts software development time and cost, eroding CSI's former competitive shield built on lengthy, expensive development cycles.

#### **High switching costs**

As AI reduces development costs, competitors can offer modern solutions at lower prices, easing the financial and operational burden of switching solutions.



## CSI impact

#### Vertical expertise

Al accelerates reverse engineering, diminishing the competitive advantage of vertical expertise, which was historically costly and difficult to replicate.

#### **Market distribution**

Distribution remains mostly resilient to AI disruption, reinforcing the importance of customer intimacy as key differentiator.



#### **Time to build**

AI drastically cuts software development time and cost, eroding CSI's former competitive shield built on lengthy, expensive development cycles.

#### Speed of development

#### **High switching costs**

As AI reduces development costs, competitors can offer modern solutions at lower prices, easing the financial and operational burden of switching solutions.



## CSI impact

#### **Vertical expertise**

Al accelerates reverse engineering, diminishing the competitive advantage of vertical expertise, which was historically costly and difficult to replicate.

#### Aggregated benchmarking data

#### **Market distribution**

Distribution remains mostly resilient to AI disruption, reinforcing the importance of customer intimacy as key differentiator.



## CSI impact

## **Vulnerabilities**

- Low complexity SaaS solutions
- Smaller business that are overwhelmed by day to day operations and cannot adapt to the new reality
- High ticket businesses with low NPS
- Horizontal businesses

## **Opportunities**

- Deliver more value from your backlog
- New initiatives with higher ROI when doing AI first development
- Certain software modernizations might make financial sense
- Maintaining legacy solutions becomes more accsible
- More efficient customer support departments





#### The AI impact on CSI

What disruptions should we anticipate?

#### **Practical AI use cases**

Where can CSI companies capture immediate value?

#### **Successfully adopting AI**

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## opportunities for software companies



#### **Employee** perspective

How employees design, develop and maintain the software

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#### **Product** perspective

How products integrate with Al models to offer more value

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#### **Customer** perspective

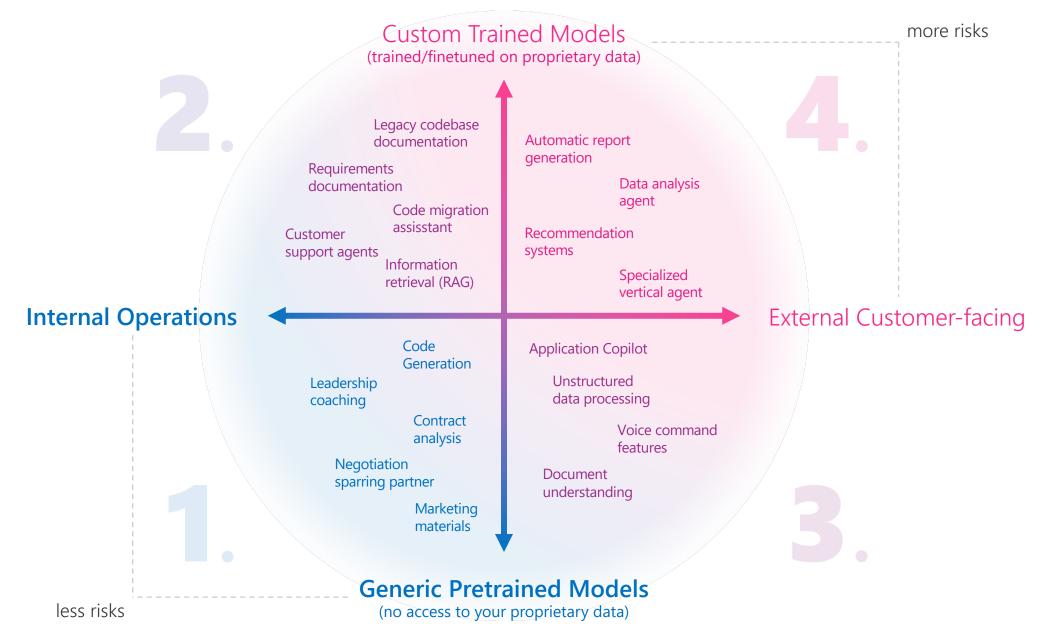
How end users interact with software products

Future

#### Present



## Al opportunities radar





## practical AI use cases

# Build new products

Reduce time to market, lower development costs, and improve ROI for new software initiatives



## **Document legacy codebases**

**5**. Modernize legacy systems



## build new products

## **1**. Build new products

A Swedish CSI company offering software for nuclear power plants was looking to build a new safety model versioning tool and convert high-level requirements into a production ready MVP.

## Project objectives

- 1. Start with a product definition phase to design the solution, select the right technical architecture and clarify the requirements
- 2. Detail the implementation effort for the minimum viable product
- 3. Leverage an Al-first software development approach



## product definition streams



## Design

Develop a clickable prototype to visualize the product and gather early feedback from customers.

#### Deliverables

- Design system
- High-fidelity mockups
- Clickable prototype



## Technical

Evaluate and recommend the most suitable technical architecture and frameworks.

#### Deliverables

- Technical solution architecture
- Recommended technology stack



## Requirements

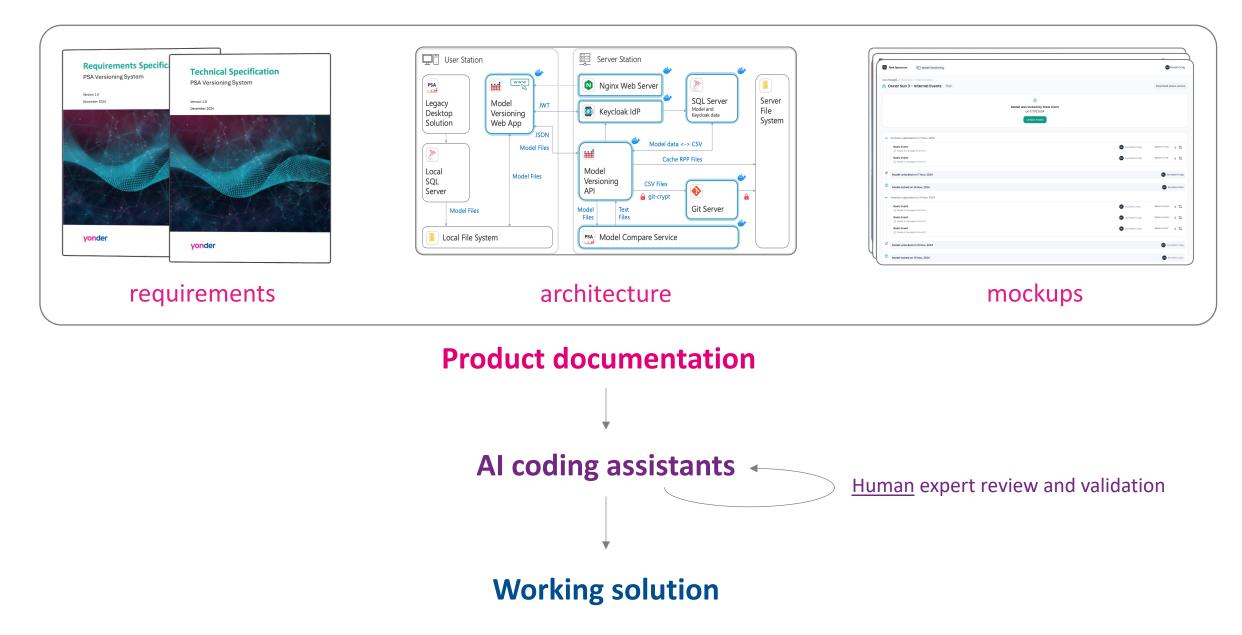
Elicit and document detailed functional and non-functional requirements.

#### Deliverables

- Detailed requirements for MVP
- High-level estimation for the MVP



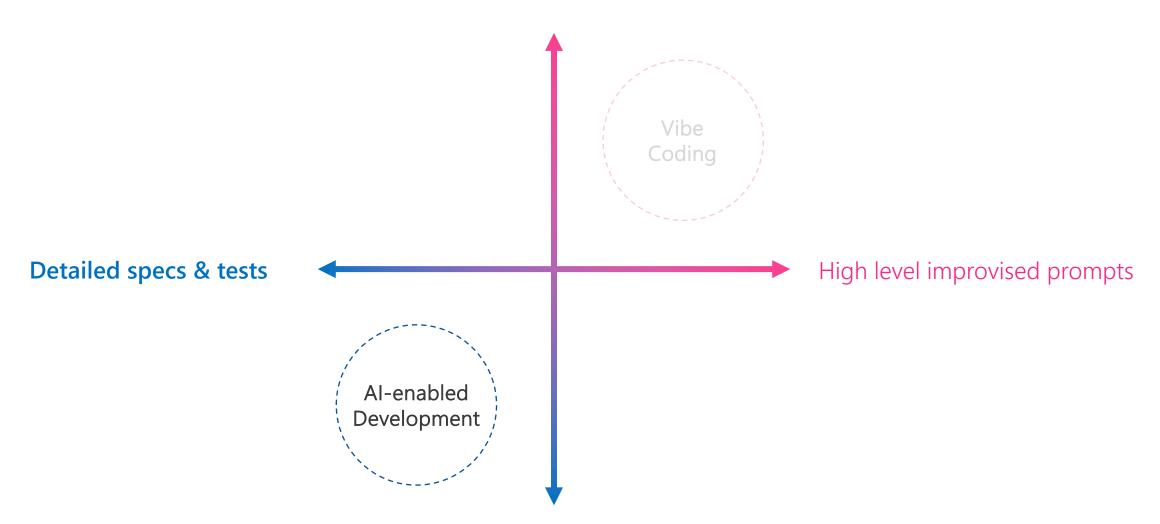
## Al-first software development





## Al-first software development

Never look at the code



Review every line of code



## production ready results

Risk Spectrum		NC Natali Craig	Risk Spectrum	Tost Usori
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ID Type  Basic Event Updated.  Basic Event Basic Event Control Description Des	ID Type		<ul> <li>foultree</li> <li>fr_001 rep_twon_Probability:0.0012</li> <li>Bosictvert</li> <li>BE_003</li> <li>BE_007 reliuvedate: Republitime:</li> <li>BE_007 reliuvedate: Republitime:</li> <li>Besictverte: Republitime:</li> <li>Statistiction:</li> <li>Statistictictictictictictictictictictictictict</li></ul>	<ul> <li>✓ Foultree</li> <li>Found_wroddobility: 0.0000</li> <li>✓ Bosictivent</li> <li>BE_007</li> <li>B</li></ul>
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## Figma Mockup

## Real Implementation

#### **Completed in 2.5 months**

(4 - 6 months initial estimation without AI)



## production ready results

## **sonar**qube

3 n Bugs		Reliability B
O & Vulnerabilities		Security A
4 Security Hotspots @	O 0.0% Reviewed	Security Review B
3h 2min Debt	23 Scode Smells	Maintainability A

## **sonar**qube

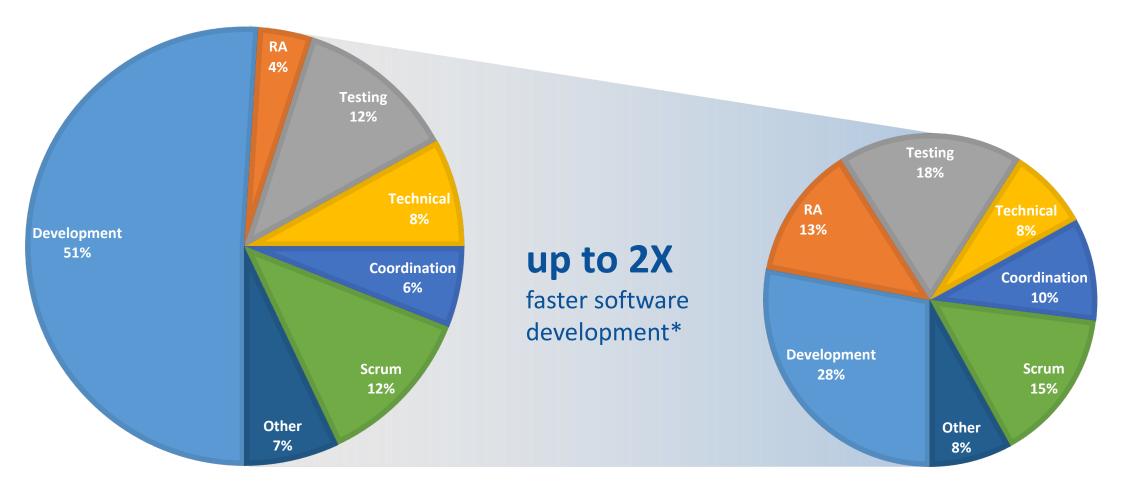
Accepted issues	Coverage 0.0%		uplications 7%	C
Valid issues that were not fixed	On 1.4k lines to cover.	On	n <b>5.6k</b> lines.	

## Frontend report

### Backend report



## Al-first software development



Effort distribution – without AI

based on 30+ years of experience

Effort distribution – with Al based on our small sample



## Al-first software development – takeaways



- Information overload
- Documentation is critical
- Prompting makes a big difference
- Expert review is critical
- Testing can be a bottleneck
- Velocity can be doubled for greenfield well documented products
- The velocity gains are highly dependent on the development team



## practical AI use cases

# Build new products

Reduce time to market, lower development costs, and improve ROI for new software initiatives



## **Document legacy codebases**

Minimize knowledge debt, improve onboarding efficiency, and simplify the maintenance of aging systems **5**. Modernize legacy systems



## document legacy codebases

## 2. Document legacy codebases

A German CSI company offering ERP solutions for social institutions was looking to help their developers maintain the 30+ years old legacy solution more effectively and reduce the knowledge debt withing the company.

PxPlus is a Business Basic derived programming language originally developed in the 1980s

LET-FLAG\$="S"¤9
CALL·"PXPOPA",H8\$,FEHL\$,Q5\$,FENSTER;-PRINT·"PUSH",II"
PRINT-@(0,0),'SCROLL'(0,0,80,20),'SF','SCROLL'("RESET"),¤¶
DIM H\$(1980); LET H\$(1)="2000000000000000000000000000000000000
CALL·"DXMAKA",H8\$,FEHL\$,Q5\$,H\$,RAUS\$,0,1,80,23,"1"¤9
PRINT、'SCROLL'("OFF"),""+""+RAUS\$,'SCROLL'("ON"),耳例
DIM H\$(1980); LET H\$(1)="6000000000000000000000000000000000000
CALL·"DXMAKA",H8\$,FEHL\$,Q5\$,H\$,RAUS\$,0,21,80,3,"0"¤9
<pre>PRINT 'SCROLL'("OFF"), 'SF'+RAUS\$, 'SCROLL'("ON"),@(2,1),"Auskunft"¤9</pre>
PRINT @(2,2), 'SF'+"Suche nach",@(2,3), "Suchschlüssel",@(2,4), "Bis-Schlüssel",@(2,5), "Gefundene Pos",@(29,7), "Pos 0/ 0"+@(1,9)+COL
LET WAHL=0 III 9
URL SLORG CALL. "DXPOPA", H8\$, FEHL\$, Q5\$, NEUFENSTER+1¤"
LET MENH\$="Beenden*Artikel-Auskunft*Verprobung*Drucken*Hilfe*",HOTH\$="BAVDH"¤9
!-LET-WAHL=0;-CALL-"PXMENH",H8\$,FEHL\$,Q5\$,22,MENH\$,"","",WAHL,WAHL\$,2,78,"00011"¤9
LET·MENU\$="Suche-nach*Artikelnummer*Arbeitsgangbezeichnung*Arbeitsgangnummer*Kostenstelle*Auftragsnummer*Bemerkung*Zeichnungsnummer*Da
LET·WAHL=0-WAHL¤9
PRINT @(0,0),'SCROLL'(0,0,80,20),'SF','SCROLL'("RESET"),¤¶
PRINT @(2,2),'SF'+"Suche nach",@(2,3),"Suchschlüssel",@(2,4),"Bis-Schlüssel",@(2,5),"Gefundene Pos",@(29,7),"Pos 0/ 0"+@(1,9)+COL
REM-WAHL=5; GOTO 1085 4
LET-WAHL=MENU_WAHL-!-CALL-"DXMENX",H8\$,FEHL\$,Q5\$,0,0,1,2,MENU\$,0,"",WAHL,HOTK\$,"","","0000111200"¤9
LET-XT\$="4123056789ABCD-"¤9
!-CALL-"DXHEAD",Q5\$,"Auskunft",0,0,78¤9
IF·WAHL=0·THEN·PRINT·'POP',;·GOTO·MENU_STCKLIST¤¶
LET-A\$=XT\$(WAHL,1)¤9
IF A\$="-"·THEN PRINT (0, ERR=*NEXT)'POP',; GOTO MENU_STCKLIST¤"
LET · SUCHTYP\$=A\$¤1
LET:WAHLMERK=WAHL¤9
GOSUB · LBL_06000¤1
LET-WAHL=WAHLMERK¤ 9
IF EINPOS=1 THEN GOTO LBL_01050
REM: "Suche beginnen"
LET P\$=@(16,2)+ <mark>XERS</mark> +'SF'+SUCHNACH\$; GOSUB LBL_03100¤"
LET·P\$=P\$+@(16,3)+SUCH\$¤9
LET P\$=P\$+@(16,4)+"-"; PRINT P\$09
LET AUFSETZ\$="0"+SUCHTYP\$+SUCH\$,ANZAHL=0,ERGEBNIS\$="",ZEILE=0,BASIS=0="
READ·(K[111],KEY=AUFSETZ\$,DOM=*NEXT,END=LBL_01200)#9
DIL BLICK: LET A\$=KEY(K[111],END=LBL_01200); IF POS(AUFSETZ\$=A\$)=0 THEN GOTO LBL_01200="
GOSUB LBL_02200; GOSUB LBL_02300:1
READ·(K[111],END=LBL_01200)¤9
GOTO-LBL_01160=9



"PXPOPA", H8\$, FEHL\$, Q5\$, FENSTER; PRINT 'PUSH', #9 PRINT @(0,0), 'SCROLL'(0,0,80,20), 'SF', 'SCROLL'("RESET"), # 031",H\$(124)="1",H\$(160)="11",H DIM H\$(1980); LET H\$(1)="2 CALL "DXMAKA", H8\$, FEHL\$, Q5\$, H\$, RAUS\$, 0, 1, 80, 23, "1" PRINT 'SCROLL'("OFF"), ""+""+RAUS\$, 'SCROLL'("ON"), # DIM H\$(1980); LET H\$(1)="6 CALL "DXMAKA", H8\$, FEHL\$, Q5\$, H\$, RAUS\$, 0, 21, 80, 3, "0" PRINT 'SCROLL'("OFF"), 'SF'+RAUS\$, 'SCROLL'("ON"),@(2,1), "Auskunft" PRINT @(2,2), 'SF '+ "Suche nach",@(2,3), "Suchschlüssel",@(2,4), "Bis-Schlüssel",@(2,5), "Gefundene Pos",@(29,7), "Pos 0/ 0"+@(1,9)+COI LET WAHL=0 CALL · "DXPOPA", H8\$, FEHL\$, Q5\$, NEUFENSTER+1 .ET MENH\$="Beenden\*Artikel-Auskunft\*Verprobung\*Drucken\*Hilfe\*",HOTH\$="BAVDH"□ CALL "PXMENH", H8\$, FEHL\$, Q5\$, 22, MENH\$, "", "", WAHL, WAHL\$, 2, 78, "00011" LET·MENU\$="Suche-nach\*Artikelnummer\*Arbeitsgangbezeichnung\*Arbeitsgangnummer\*Kostenstelle\*Auftragsnummer\*Bemerkung\*Zeichnungsnummer ET WAHL=0-WAHL PRINT @(0,0), 'SCROLL'(0,0,80,20), 'SF', 'SCROLL'("RESET"),¤" PRINT @(2,2), 'SF '+ "Suche nach",@(2,3), "Suchschlüssel",@(2,4), "Bis-Schlüssel",@(2,5), "Gefundene Pos",@(29,7), "Pos 0/ 0"+@(1,9)+COL ET WAHL = MENU WAHL ! CALL "DXMENX", H8\$, FEHL\$, Q5\$, 0, 0, 1, 2, MENU\$, 0, "", WAHL, HOTK\$, "", "", "0000111200 FT XT\$="41230567894BCD-"0 HEAD",Q5\$," Auskunft",0,0,78 WAHL=0 THEN PRINT 'POP',; GOTO MENU\_STCKLIST THEN PRINT (0, ERR=\*NEXT) 'POP',; GOTO MENU\_STCKLIST# HEN GOTO LBL 01050 ET P\$=@(16,2)+%ER\$+'SF'+SUCHNACH\$; GOSUB LBL 03100= ET P\$=P\$+@(16.3)+SUCH\$ ET P\$=P\$+@(16,4)+"-"; PRINT P\$¤" \_ET AUFSETZ\$="0"+SUCHTYP\$+SUCH\$,ANZAHL=0,ERGEBNIS\$="",ZEILE=0,BASIS=0=" READ (K[111], KEY=AUFSETZ\$, DOM=\*NEXT, END=LBL 01200) LET A\$=KEY(K[111], END=LBL\_01200); IF POS(AUFSETZ\$=A\$)=0 THEN GOTO LBL\_01200 GOSUB LBL\_02200; GOSUB LBL\_02300 READ (K[111], END=LBL\_01200) GOTO LBL 01160

#### LLM: What is this code doing?

## document legacy codebases

#### In plain English

- 1. Paint a pop-up window titled *Auskunft* (information).
- 2. Show a menu bar (Quit, Article-Info, Verification, Print).

3. Ask how you want to search (by article-number, routingstep, drawing-number ...).

4. Accept a "from" and an optional "to" key, enforcing a mask so only valid characters are typed.

5. Build a composite key and walk through file 111 in key order, collecting every record whose key begins with the prefix.

6. Each hit is pushed into the scrolling list pane via two small display sub-routines.

7. When the key prefix no longer matches, or the user cancels, the routine restores the screen (PRINT 'POP') and returns to its caller.



## document legacy codebases

••• • • < >	Where are report headers created?	₫ + G
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Home AY Documentation AY1300 AY1520 AY5000 AY7400	Report headers are created using a specific method called <b>DWKOPF</b> . This method is responsible for managing the creation of report headers within the system. It is part of the overall printing functionality, which is essential for generating reports that include headers to provide context and information about the content that follows. If you need more details about how report headers are structured or any related information, let me know!	ICK+WAGNER system. ction patterns.
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## practical AI use cases

# Build new products

Reduce time to market, lower development costs, and improve ROI for new software initiatives



## **Document legacy codebases**

Minimize knowledge debt, improve onboarding efficiency, and simplify the maintenance of aging systems Modernize legacy systems

Accelerate modernizations, reduce manual effort, and lower the risks of migrating outdated codebases



An Italian CSI company offering ERP solutions for automotive was looking modernize a solution that was build using 4GL due to being squeezed by the vendor. Last year they evaluated a low code tool for the modernization. This year, we evaluated using AI for the modernization.

## **Project objectives**

- 1. Out of the total 800 screens in the ERP, select one high and one medium complexity screen
- 2. Leverage the legacy files and screenshots associated to the screens
- 3. Use LLMs to generate screen layout configuration
- 4. Generate modern React screens that resemble the ordinal solutions



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#### Original screenshot

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	< <u>link href="sirjstyle1.css"</u> rel="stylesheet" type="text/css">
	<pre>&lt;&lt;=com.unify.nxj.awebServlet.Runtime.generateOnLoad(request, response, application)%&gt;</pre>
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11	add_allowed="true"
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22	find_allowed="true"
22	footer="default"
23	form_height="617"
25	form_width="1008"
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27	header="default"
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29	menu="default"
30	name="NXJForm"
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	<pre>style="position: absolute; top: 0px; left: 0px; width:996px; height:605px"&gt;</pre>
	<pre><div< pre=""></div<></pre>
	add_allowed="true"
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	auto_commit="true"
	auto_refresh="false"
	<pre>base_class="Classes/baseForm.fx"</pre>
	baseform_1153593316671_024195d6b443e37bf1055c7544108c35aad81620_1207578191654-field1
	batch_record_update="false"
49	binary_variables=""

Legacy Unify code



	itml>	
	nead>	
	<link href="sirjstyle1.css" rel="stylesheet" type="text/css"/>	
	-	
6 🛹	k=com.unify.nxj.awebServlet.Runtime.generateOnLoad(request, response, application)%>	
	<pre>woody onLoad="initPreview(false, -1, -1, 'file:///C:\Unify\NXJ/web-app/unify/images', 'file:///C:/Su</pre>	
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	add_allowed="true"	
	aud_on_entry="false"	
	auto_commit="true"	
	binary_variables=""	
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	click_on_field="true"	
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	delete_allowed="true"	
	displayheight="605"	
	displaywidth="980"	
	field_order=""	
	find_allowed="true"	
23	footer="default"	LLM
	form_height="617"	
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24 25 26	<pre>form_width="1008" foundation_type="Classes/Foundation/Form"</pre>	
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Screenshot & legacy Unify code

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	<pre>import type { FormConfig } from "/types/form-config"</pre>
	<pre>export const tscogeFormConfig: FormConfig = {</pre>
	<pre>id: "tscoge-prima-nota", // Derived from filename/context</pre>
	title: "tscoge – Prima nota", // From form title/menu_label
	apiEndpoint: "/api/tscoge", // Updated to correctly point to tscoge collection
	<pre>primaryKey: "te_codice", // Primary key based on context</pre>
	lookup: {
	endpoints: {
	<pre>movimenti: "/api/movimenti", // For te_codice lookup</pre>
11	<pre>mazzette: "/api/mazzette", // For te_nummaz lookup</pre>
12	<pre>causali: "/api/causali", // For te_causale lookup</pre>
13	<pre>clients: "/api/clients", // For te_cfc_cf_num when type is 'C'</pre>
14	<pre>suppliers: "/api/suppliers", // For te_cfc_cf_num when type is 'F'</pre>
	registriIva: "/api/registri-iva", // For te_regiva and Num_Regiva lookups
	valute: "/api/valute", // For te_valuta lookup
17	<pre>pagamenti: "/api/pagamenti", // For te_condpag lookup</pre>
	<pre>banche: "/api/banche", // For te_bap_age_bca, te_bsc_age_bca lookups</pre>
	// Add other potential lookup endpoints if needed
	$\rightarrow$
21	defaultValueField: "code", // Default field to use for the value
22	defaultDisplayField: "description", // Default field to display
23	cacheTimeout: 300000, // 5 minutes cache
24	},
25	components: [
	// Specifiche di Base
27	
	id: "specifiche-base-card",
	type: "card",
30	className: "mb-6",
	children: [
32	
33	<pre>id: "specifiche-base-section",</pre>
34	type: "section",
	title: "Specifiche di Base", // From specBaseBOX legend
36	children: [
38	id: "base-grid",
	type: "grid",
40	<pre>gap: "gap-x-6 gap-y-4", // Increase gap for better spacing</pre>
	children: [
42	
43	id: "utente-field",
44	type: "field",
	field: {
	<pre>id: "utente", // Mapped from specBaseBOX:te_nomeutente</pre>
47	label: "Utente:", // From specBaseBOX:label0003

LLM generated Layout configuration file



	Cirstean > TS LayoutConfig.ts > [@] tscogeFormConfig > & components > & tabs > & content > & children > & ort type { FormConfig } from "/types/form-config"
3 expo 4 id 5 ti 6 ap 7 pr	<pre>ort const tscogeFormConfig: FormConfig = {     : "tscoge-prima-nota", // Derived from filename/context     itle: "tscoge - Prima nota", // From form title/menu_label     oiEndpoint: "/api/tscoge", // Updated to correctly point to tscoge collection     rimaryKey: "te_codice", // Primary key based on context     ookup: {     endpoints: {         movimenti: "/api/movimenti", // For te_codice lookup         mazzette: "/api/mazzette", // For te_nummaz lookup         causali: "/api/causali", // For te_causale lookup</pre>
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Banca di Sconto:	Q 00000 00000
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36	children: [
	id: "base-grid",
	type: "grid",
	gap: "gap-x-6 gap-y-4", // Increase gap for better spacing
	children: [
42	
	<pre>id: "utente-field",</pre>
44	type: "field",
	field: {
46 47	<pre>id: "utente", // Mapped from specBaseBOX:te_nomeutente label: "Utente:", // From specBaseBOX:label0003</pre>
47	tabet: otente: , // From specbasebox: tabet0003

Screenshot & layout config file

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#### LLM generated React page

Accurate layout

LLM

- Easy to modify and maintain
- Data & API mapping
- Deterministic implementation



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Low code

Original

LLM generated ReactJS

**50-60% velocity increase** compared to low code approach



## opportunities for software companies



#### **Employee** perspective

How employees design, develop and maintain the software

#### **Proactive adoption**

Customer support agents Marketing materials Product documentation New products Modernizations

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#### **Product** perspective

How products integrate with Al models to offer more value



#### **Customer** perspective

How end users interact with software products

#### **Small experiments**

Data analytics Document understanding MCPs Specialized agents

#### **Research only**





#### The AI impact on CSI

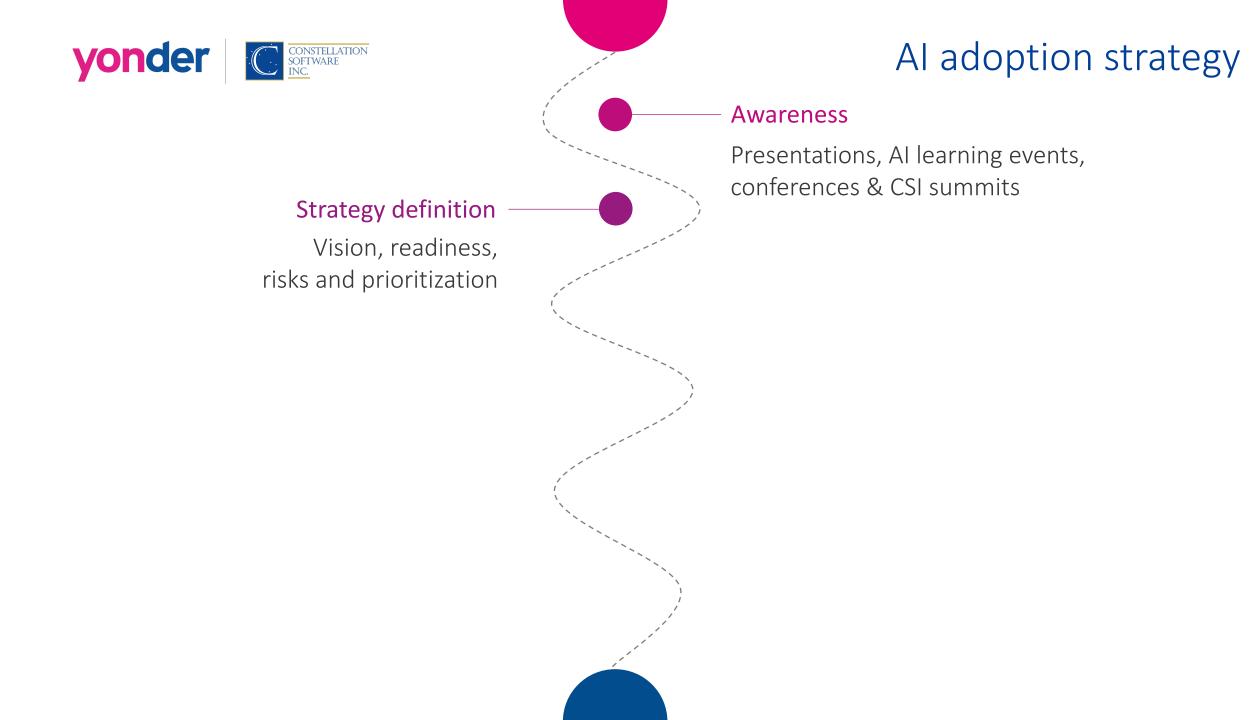
What disruptions should we anticipate?

#### **Practical AI use cases**

Where can CSI companies capture immediate value?

#### **Successfully adopting AI**

How to prepare your business?





## Al adoption strategy

#### Vision

Define how AI will drive your business goals, the specific benefits you expect, and how you will measure success.

Goals | Benefits | Success metrics

## **Prioritization**

Identify the most promising AI initiatives to pursue by evaluating both their value and feasibility, with alignment between the business leaders.

Use cases | Feasibility | Added value

### Readiness

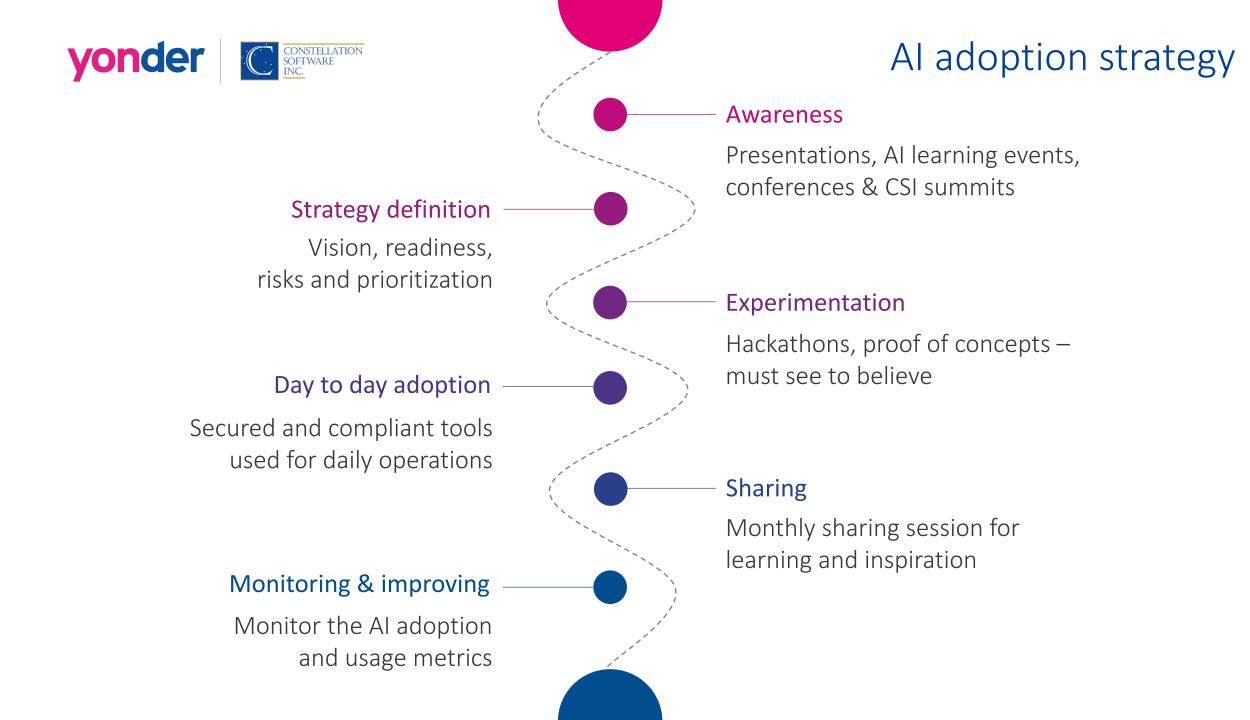
Evaluate your current infrastructure, data assets, and team expertise to determine AI adoption readiness and gaps that need to be addressed.

Access to models | Data | People and skills

## Risks

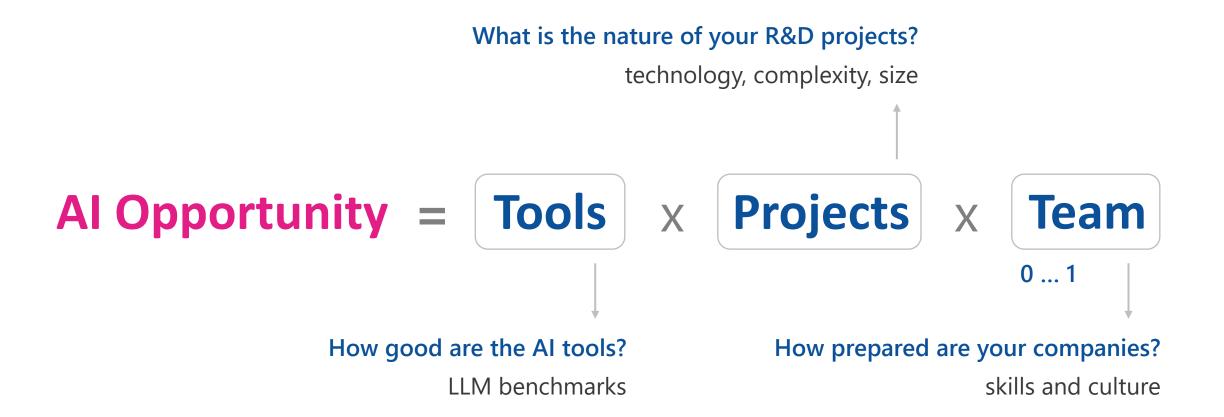
Identify potential risks in adopting AI, including technical, operational, and legal, and develop strategies to mitigate them.

Regulations | Security | Compliance



## Al adoption strategy





## yonder

## How prepared are your companies?

Paul Cirstean

let's connect on in

Portfolio Managers Focus Group