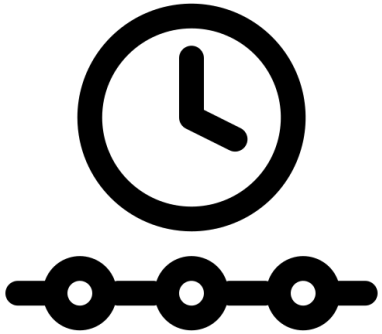
Using Generative AI for software development

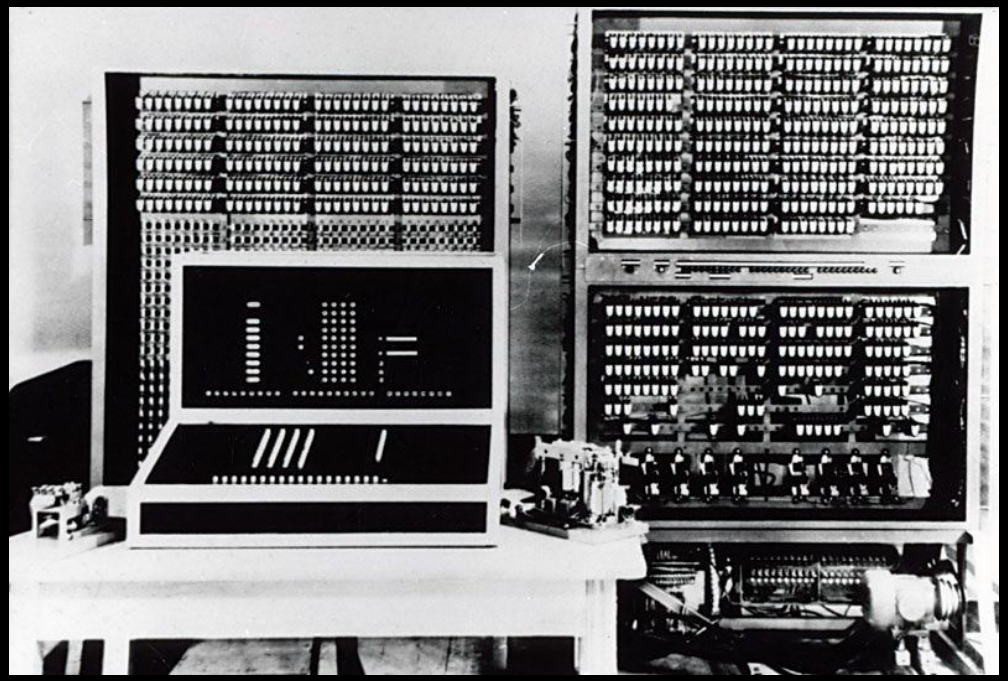
It’s about tech #8

Nikola Miladinovic

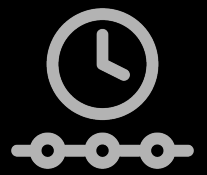
History of software development



History of software development
1940-1950



History of software development
1960-1970



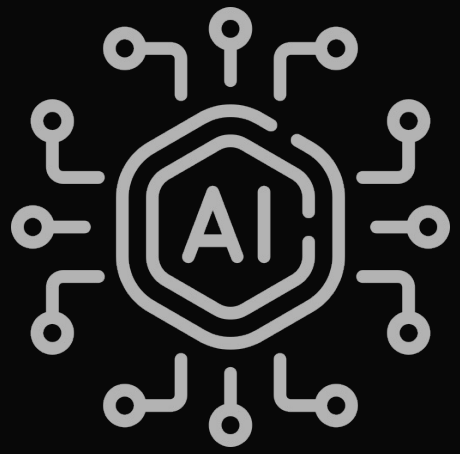
```
>Edit: A(djst C(py D(lete F(ind I(nsrt J(mp R(place Q(uit X(chng Z(ap  [1.1]
$       USES APPLESTUFF
        PROGRAM SIREN
        INTEGER CYCLES, PITCH

        DO 30 CYCLES = 1, 15

                DO 10 PITCH = 30, 50
                        CALL NOTE (PITCH, 1)
 10             CONTINUE

                DO 20 PITCH = 50, 30, -1
                        CALL NOTE (PITCH, 1)
 20             CONTINUE

 30     CONTINUE

        WRITE (*, 40)
     *     CHAR(15), 'YOU''RE UNDER ARREST, JOE FORTRAN!', CHAR(14)
 40     FORMAT (A, A, A)

        END
```

History of software development
1970-1980

History of software development
1990-2000

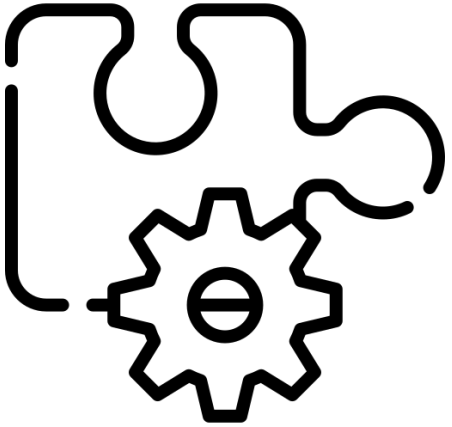
History of software development
2000-Present

Generative AI and software development

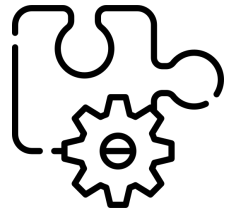


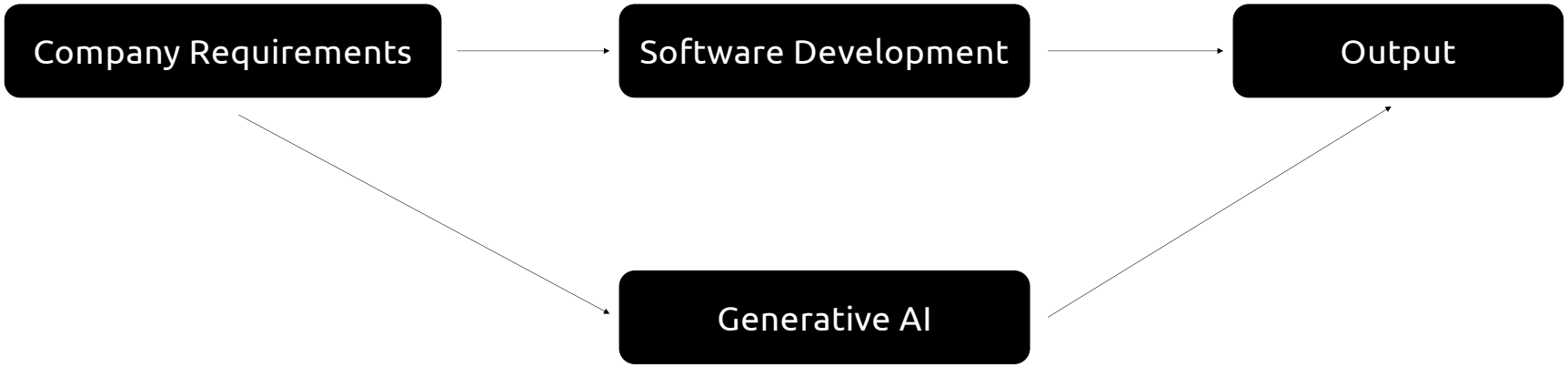
- Code Generation and Assistance
- Refactoring and Optimization
- Documentation and Code Comments
- Testing and Debugging
- Security
- Project Management

Software without coding

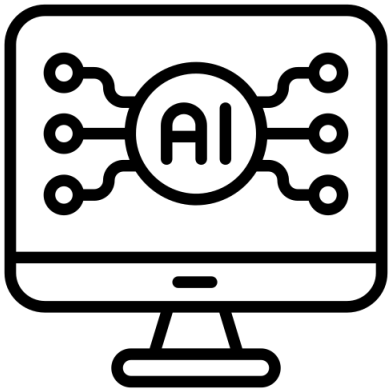


Software without coding
Software Development Process

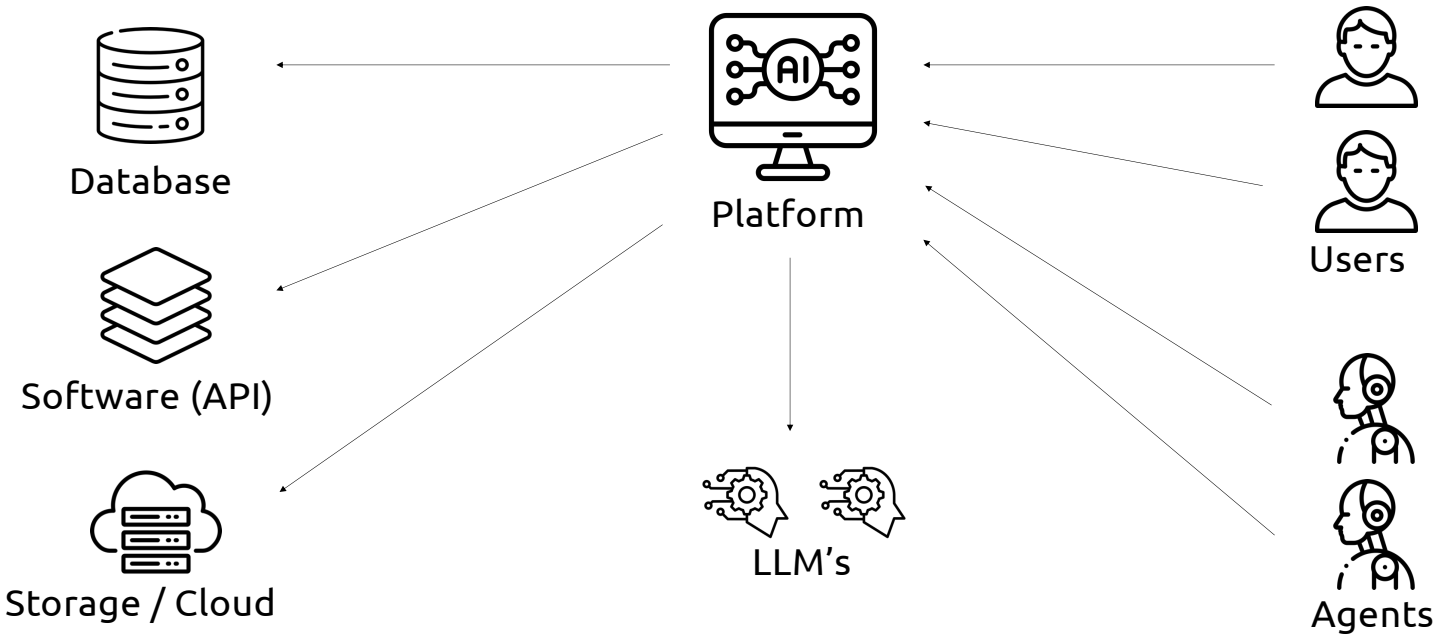




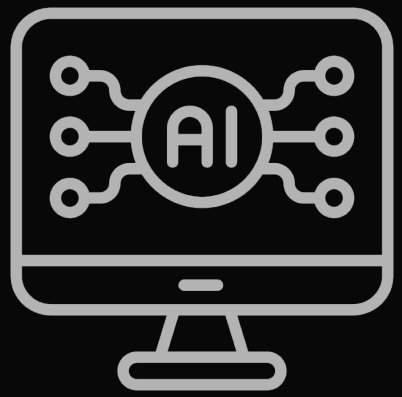
AI platform



AI platform
Overview



AI platform



- Agents with expert domain knowledge
- Agents can be reactive, proactive
- System prompts
- Guardrails
- Fine tuning of models
- How to ask questions, junk in, junk out
- Chat between users and agents

AI fails

- McDonald‘s
- Chevrolet

Using Generative AI for software development

It’s about tech #8

Lunistra

Private and secure collaborative AI platform