

Aidan Mellin

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SUMMARY

Software Engineer with experience in developing data processing pipelines and optimizing software for efficiency. Proficient in multiple programming languages and technologies, with a focus on performance optimization and test-driven development.

SKILLS

C, C++, C#, Python, SQL, TypeScript, Go (Golang), Git, PostgreSQL, Performance Optimization, Test-Driven Development (TDD)

WORK EXPERIENCE

Kion Group AG

Software Engineer

May 2023 - Present

Remote

- Developed a high-density pallet transfer pipeline, increasing shipping throughput by 21%.
- Led onsite integration testing and production deployment across three customer locations.
- Optimized crane movement software to reduce latency in pallet transfers.

American Federation of Government Employees

Contract Software Engineer

Mar 2025 - Mar 2025

Remote

- Engineered a data processing pipeline to extract, clean, and analyze contract savings data, identifying inconsistencies and missing information.
- Developed structured datasets and reports that enabled legal teams to challenge Department of Government Efficiency (DOGE) claims, strengthening litigation efforts.
- Built interactive data visualizations to highlight discrepancies and trends, improving legal discovery and case preparation.

Eagleview Technologies

Software Engineer Co-op

Jan 2022 - Aug 2022

Rochester, NY

- Automated data storage and management for government contract compliance.
- Designed cloud-based solutions to populate key data, reducing pilot handoff delays.
- Built front-end tools for GIS systems and first-responder mapping solutions.

PROJECTS

Word Hyphenation Algorithm

Apr 2025 - Present

- Developing a C-based, TeX-inspired hyphenation library for cross-platform use.
- Implementing packed trie data structures for efficient and portable hyphenation.
- Creating a module for customizable poetic pattern generation.

NYT Spelling Bee Solver

May 2025 - May 2025

- Implemented a trie-based word search engine to solve NYT Spelling Bee puzzles with recursive prefix pruning and central-letter enforcement.
- Used bitwise masking to detect pangrams efficiently by encoding character presence and comparing against full letter sets.
- Optimized performance with early-abandon logic, depth cutoffs, and dictionary-based heuristics for scalable word generation.

Spotify Organizer

Apr 2024 - Jun 2024

- Built a playlist management tool with a custom scoring algorithm using Spotify API.
- Developed a Flask-based front end for easy manipulation and filtering.
- Designed a scalable system to optimize large playlist organization.

EDUCATION

Rochester Institute of Technology

B.S. Computer Science

Jan 2019 - May 2024