Elie Salem

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EDUCATION

Harvard University   Cambridge, MA
A.B. in Computer Science & Philosophy (Double Major)   Dec 2024

- Relevant Coursework: Data Science, Algorithms, Systems Programming, AI, Natural Language Processing, Statistics, C++.
- Thesis: Worked on thesis in the philosophy of mind with the department head; completed the CS degree in two years.

EXPERIENCE

Philosophy Intelligence Analyst   Feb 2025 – Present
Mercor

- Managed hands-on technical product management for AI-driven data labeling, ensuring data quality and streamlined processes.
- Evaluated AI-generated philosophy prompts using rigorous performance benchmarks to refine and optimize model outputs.
- Collaborated with cross-functional teams to merge interdisciplinary insights from philosophy and AI, bolstering system reliability.

Research Assistant, AI4CommSci Lab   Feb 2025 – Present
MGH Institute of Health Professions

- Digitized and standardized linguistic datasets for endangered languages, enhancing data accessibility for preservation research.
- Fine-tuned OCR models and validated dataset accuracy through iterative testing, significantly improving research data quality.
- Coordinated with academic and technical teams to align innovative research methodologies with state-of-the-art AI techniques.

Technology & Product Development Intern   Jan 2024 – Jan 2025
HBS Future of Media Project, Harvard Business School, Cambridge, MA

- Served as the sole undergraduate among FAANG-experienced interns, collaborating closely with senior leadership.
- Co-authored a publication on digital transformation and emerging EdTech trends, synthesizing research and data analysis.
- Spearheaded the ideation and prototyping of innovative EdTech product concepts using agile methodologies and iterative feedback.
- Enhanced cross-departmental communication to ensure strategic alignment between product vision, market trends, and user needs.

Data Engineer   Jun 2024 – Aug 2024
Keel Ventures, New York, NY

- Developed a robust data pipeline with D3.js and React, integrating scraped datasets with advanced statistical analysis.
- Designed a dynamic front-end interface that enabled investors to visualize key trends, improving decision-making.
- Collaborated with data analysts and product teams to streamline data ingestion, enhancing operational efficiency.

LEADERSHIP

Head Writer   Dec 2022 – Dec 2024
The Harvard Lampoon, Cambridge, MA

- Directed editorial strategy for renowned humor publication, leveraging creative leadership to produce high-quality content.
- Managed a team of 50 writers and editors, overseeing content creation, editorial calendars, and strict publication timelines.
- Led the development of a book proposal to the final round through data-backed market analysis and creative storytelling.

PROJECTS

Flight Query App

- Developed a grammar-based parser to convert natural language queries into SQL, enhancing user interaction with databases.
- Implemented neural encoder-decoder models achieving a 45% query prediction accuracy, validated on a test set of 10,000+ queries.
- Optimized parsing efficiency, reducing query response time by 35% and increasing throughput for a dataset of 500,000+ records.
- Collaborated with a team to refine the model design and user interface, resulting in a 25% improvement in overall system usability.

Endangered Trading Website

- Developed nine interactive D3.js visualizations to illustrate endangered species trade, applying advanced visualization techniques.
- Designed an intuitive, data-driven interface that makes complex trade patterns more accessible and engaging.
- Selected as a standout project in a class of over 100 students, demonstrating strong analytical and design skills.

Custom Unix Shell Implementation

- Built a Unix shell to parse and execute Bash-like commands, supporting pipelines, conditionals, and background execution.
- Implemented core system calls (`fork()`, `execvp()`, `pipe()`, `waitpid()`) for efficient process management.
- Designed a robust redirection system (`<`, `>`, `2>`) with fail-safe error handling for reliable command execution.
- Engineered a streamlined parsing mechanism using a custom grammar, enhancing execution speed and user responsiveness.

TECHNICAL SKILLS

Technical: Python, C++, SQL, Java, JavaScript, OCaml, NewLisp, TypeScript
Web & Data: React, D3.js, Node.js, Flask, AWS, MongoDB, Docker, Linux
Analytics: Data Visualization, Machine Learning, NLP, Pipeline Development
Other: Fluent Arabic, tri-state debate champion, pre-professional classical pianist