

DANIEL COHEN

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EDUCATION

Duke University

Aug 2022 – May 2026

B.S. in Computer Science, Concentration in A.I. | Minor in Statistical Science | Minor in Economics

Durham, NC

GPA: 3.93/4.0 | Deans List with Distinction | Alpha Kappa Psi Business Fraternity | Quantitative Finance Club

Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Machine Learning, Probability, Linear Algebra

WORK EXPERIENCE

Amazon(AWS)

May 2025 – Aug 2025

Software Engineer Intern

New York, New York

- Incoming SWE intern

Esri

May 2024 – Aug 2024

Software Engineer Intern

Redlands, CA

- Developed a Python-based solution to locate detected text in indoor buildings using OCR, trigonometric calculations, projection across coordinate systems, saving an average of 5 hours of manual data entry per customer
- Utilized an ensemble method combining Keras, Tesseract, and MMOCR with an algorithm to unwarped text in 360-degree photos, achieving a 38% increase in text extraction accuracy and a 27% increase in positioning accuracy
- Trained a model using PointCNN to detect desks in Lidar data, achieving 82% accuracy on validation datasets

Duke University – Biomedical Engineering Research

May 2024 – April 2025

Software Engineer

Remote

- Implemented and optimized a suite of Python-based analysis tools on the Duke Compute Cluster, integrating methods for cell segmentation, data normalization, and cellular neighborhood analysis
- Analyzed data from 1,000+ stained lung cancer samples treated with immunotherapy alongside Dr. John Hickey
- Conducted multiplexed tissue imaging with CODEX, mapping cellular interactions using 54 unique protein markers

Goliath Data AI

March 2024

Software Engineer Intern

Remote

- Created a web-based tool for real estate rehab analysis, offering interactive calculations and CSV export functionality
- Developed client-side functionality using TypeScript and React.js, enabling dynamic updates and reducing server load
- Adopted Tailwind CSS for UI, reducing page load times by 7% and CSS codebase size by 44% for better performance

PROJECTS & TECHNOLOGIES

Languages: C/C++, HTML/CSS, Java, JavaScript, LaTeX, Python, R, Typescript

Technologies/Frameworks: Firebase, Keras, MongoDB, MySQL, NumPy, PostgreSQL, Pytesseract, Pytorch, React.js

PsychAide – [Demo](#)

Jan - May 2025

- Led full-stack development of PsychAide (Next.js, React, TypeScript), delivering a HIPAA-compliant case management platform adopted by 30+ professionals
- Added PostgreSQL cursor-based pagination, loading 25-record pages and cutting average response times by 70%

Path & Petal – [GitHub](#)

Feb 2025

- Developed a platform for hikers to identify, report, and learn about invasive plants, placing 2nd at HackDuke 2025
- Implemented lazy-loaded client-side clustering of OpenStreetMap markers, reducing initial map load times by 60%

ArcGIS Care – [GitHub](#)

Jul 2024

- Developed an app to track medical equipment via cameras, presented to 550+ attendees in the hackathon finalist round
- Trained a YOLOv8 model to track gurneys and crash carts, achieving 91% accuracy within a 15-foot range
- Utilized FastAPI for websockets, Typescript/React.js, and various ArcGIS JS APIs for front-end visualization

OCR Linear Algebra Calculator - [GitHub](#)

May 2024

- Created a command line based Python tool to solve matrix problems from images in a without external math libraries
- Integrated pytesseract OCR technology, achieving 97% accuracy in character recognition within matrices

Logisim CPU

Dec 2023

- Designed and implemented a 16-bit CPU with 9 functional units, including ALU, control unit, and registers
- Integrated a set of 16 instructions into the CPU, enabling complex arithmetic and logical operations

Huffman Process Compression Program - [GitHub](#)

Mar 2023

- Executed Huffman Compression in Java, achieving data compression for files ranging up to 12 GB in size
- Utilized binary tree traversal to compress and decompress data 43% faster than traditional compression methods

SKILLS

Skills/Certifications: Spanish (Conversational), Sandler Sales Training Bronze Certified, Duke Investment Training Certified