

DANIEL COHEN

(954)-294-6253 | danieljcohen0@gmail.com | github.com/danieljcohen | linkedin.com/in/danielcohen0

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: 3.91/4.0 | Deans List with Distinction | Alpha Kappa Psi Business Fraternity | Quantitative Finance Club
Relevant Coursework: Data Structures & Algorithms, Computer Architecture, Machine Learning, Probability, Linear Algebra

Pine Crest High School **Aug 2018 – May 2022**
GPA: 4.0/4.0 | **ACT:** 35/36 | **SAT Math:** 800/800 | National Merit Finalist | Cum Laude Fort Lauderdale, FL

WORK EXPERIENCE

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 unwarp 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 – Present**
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

ArcGIS Care **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 **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 **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

EXTRACURRICULAR INVOLVEMENT

Second Life Project **Aug 2018 – Present**
President (2020-2022), Head of Community Outreach (2023-2024) Fort Lauderdale, FL

- Refurbished and donated 400+ laptops to students in need of a computer for education in coordination with the ULBC
- Organized a graduation ceremony with the Miami Dolphins to donate the laptops and celebrate the graduates

SKILLS

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