David Grossman

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EDUCATION

Brown University   Providence, RI
Sc.B. in Applied Math-Computer Science, GPA: 4.0/4.0   Expected Graduation May 2024

- *Relevant Coursework:* Algorithms and Data Structures, Software Engineering, Object-Oriented Programming, Discrete Structures and Probability, Computer Systems, Deep Learning, Computer Vision, Data Science
- *Activities*: AI Robotics Ethics Society (Vice President & Head of Research), Club Tennis Team, Poker Club

Andover High School   Andover, MA
GPA: 4.0/4.0   September 2016 - May 2020

- Valedictorian, American CS League (2x State Champion), AIME Qualifier (4x), USAPhO Qualifier, Harvard Book Award, Math Team (Captain & District Champion), Tennis Team (Captain & MVP)

EXPERIENCE

Kapwing   San Francisco, CA
Software Engineering Intern   May 2022 - August 2022

- Launched React-Redux frontend and Flask backend for AI video editing toolkit that serves 10k+ weekly users
- Constructed C++ MediaPipe graph to perform content-aware video resizing and compress output by over 95%
- Engineered REST API endpoint for multithreaded scene detection algorithm that processes 3k+ frames per second
- Implemented Cypress end-to-end tests and Jest unit tests for each feature, surpassing 80% regression test coverage

Deep Learning (CS1470)   Providence, RI
Teaching Assistant   March 2022 - Present

- Instructed 200+ Brown students on MLPs, CNNs, VAEs, Deep Q-Learning, LSTMs, GRUs, and Transformers
- Created TensorFlow coding assignment on Graph Convolutional Networks (GCNs) for social recommendation

Brown Visual Computing Lab   Providence, RI
Research Assistant   May 2021 - January 2022

- Developed MERN-stack web app for editing, organizing, and storing 24 types of hypermedia documents
- Overhauled database search with PageRank algorithm, advanced search operators, and 40% faster loading time

NE Tennis Academy   Natick, MA
iOS Developer   April 2019 - September 2019

- Coded native iOS app for analyzing tennis match statistics in customizable categories (4.5+ stars on App Store)
- Configured Realm database to store properties of each point, game, set, and match in object-oriented structure

PROJECTS

Social Helix | *Web3, Solidity, MySQL, Firebase, JavaScript, Express, React Native*

- Built Ethereum smart contract and React Native app for trading ERC-1155 crypto tokens in USD liquidity pools
- Invented patent-pending blockchain protocol for distributed order matching engines in decentralized exchange
- Deployed Express server on Google Cloud Linux VM instance to process transactions and query MySQL database

Messenger Wrapped | *Python, Flask, NLTK, MongoDB, TypeScript, React*

- Architected data pipeline to perform sentiment analysis on Messenger chat history and store results in MongoDB
- Ensured security and privacy of sensitive user data with two-factor authentication and AES-256 encryption

SKILLS

- **Languages**: JavaScript/TypeScript, Python, Java, HTML/CSS, Solidity, SQL, Swift, C, C++, MATLAB, Go
- **Technical**: Node.js, React, Next.js, React Native, Redux, Selenium, Express, Flask, REST, MongoDB, Firebase, NumPy, Pandas, Matplotlib, TensorFlow, MapReduce, Linux, Ethereum Virtual Machine, Heroku, Git
- **Other Interests**: Tennis, Piano, Music composition, Chess, Poker, Quantum computing, Number theory