Will Corcoran

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EDUCATION

University of California, Santa Barbara (UCSB) Expected: June 2025

Bachelor of Science (B.S.), Computer Science | GPA: 4.0

Regents Scholar (top 2% of admitted students) | College of Engineering Honors | Dean's Honors

RELEVANT COURSEWORK

Data Structures and Algorithms, Algorithms Engineering, Automata and Formal Languages, Matrices and Numerical Algorithms, Computer Architecture, Programming Languages, Machine Learning, Object Oriented Design, Discrete Mathematics

WORK EXPERIENCE

Haggard Labs, Fullstack Software Engineering Intern June 2023-Sep. 2023

- Assisted the launch of *Yopp,* a financial wealth aggregation application, with a focus on user experience and interface.
- Designed an ease-of-use platform for simple addition and relevant analysis with React Native and TypeScript.
- Optimized data writing and retrieval by up to 80% through NoSQL database management.
- Engineered secure serverless functions to retrieve financial data from external entities via RESTful APIs, leveraging Node.js and Firebase Cloud Functions.
- Communicated closely with the oversight team to ensure quality control and align design with strategic objectives.

RESEARCH EXPERIENCE

Dynamo Lab: Dynamic Networks, Student Researcher Sep. 2023-Present

- Formulating a proprietary query language to enhance user query capabilities for graph neural network embeddings and the corresponding graph database.
- Contrasting distances between graph nodes in input space from their respective embedding in latent space, ultimately, examining node and subgraph outliers across representations produced by other deep learning methods.
- Considering different ways to reduce distortions in embeddings and measuring local dimensionality of such space.
- Practicing fundamental aspects of computer science research through teamwork, problem identification, literature digestion, data analysis, and other practices.

PROJECTS

NcaamGNN Dec. 2023-Present

- Pioneering a proprietary weighted-edge link prediction algorithm for the margin of victory in college basketball games.
- Incorporating analysis among similar opponents and integrating statistical feature vectors for enhanced accuracy.
- Proficiently collecting, cleaning, and managing extensive data from 2010 onwards using Selenium and Pandas, while utilizing PyTorch Geometric to model and organize the data as a graph.
- Leveraging a sophisticated multi-layer Graph Neural Network model implemented in PyTorch.

FillerAI Sep. 2023-Dec. 2023

- Developing an AI player for a strategy game using Minimax with Alpha-Beta pruning algorithms to make quality moves.
- Formulated specific mathematically-rigorous evaluation function to best quantify board states for AI player.
- Employed Next.js to develop a seamless and interactive environment, ensuring swift responsiveness from AI players.
- Harnessing GitHub Actions to merge development and production branches for a smooth distribution process.

Verde Jan. 2023-Mar. 2023

- Crafted a social media app, *Verde*, with daily environmentally-focused challenges along with photos and user interaction.
- Contributed with a team of 3 others in a team-oriented development process using React Native, Expo, and Firebase.
- Awarded 1st place in UCSB's Google Developers' 2023 Solution Challenge.

LEADERSHIP EXPERIENCE

CRU, Real Life, Leadership Committee Sep. 2023-Present

- Coordinating and planning weekly events, meetings, and dinners.
- Managing club outreach through social media, personal communication, and other forms of marketing.
- Communicating with other students about their beings and purpose.

9929 Records, Independent Label Music Executive Aug. 2021-Present

- Establishing three artists from the ground up using image and likeness, sound, and social media.
- Creating, producing, and publishing five albums and more than one hundred songs with over 450,000 streams.
- Analyzing trends and data to create a marketing plan for each release and performance.

VOLUNTEERING EXPERIENCE

Goleta Valley Junior High School, 8th Grade Math Volunteer Sep. 2022-Present

- Leading a group of five or more students down paths to accomplish classwork and review homework.
- Providing support for instructors of under-performing classes through individualized, targeted instruction.

SKILLS

Technical (order of proficiency): C++, Python, JavaScript, TypeScript, React Native, Firebase, Node.js, Adobe Suite, Java, LaTeX, GitHub, Docker, Expo, SQL, HTML/CSS, Postgres, Rust, Solidity, Flask, Numpy, PyTorch, ArangoDB, CompTIA