ALASTAIR DENG

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Education

Stanford University   Stanford, CA
GPA: 4.017, B.S. in Computer Science & Math   June 2027
Relevant Coursework: Machine Learning, Operating Systems, Design and Analysis of Algorithms
Business Association of Stanford Entrepreneurial Students (BASES) — *Startup Development Team Director*

Benjamin Franklin High School   New Orleans, LA
Valedictorian, Track & Field Junior Olympian, All-National Violinist, GPA: 4.0, ACT: 36   May 2023

Technical Skills

Programming Technologies: Python, JavaScript/TypeScript, C, C++, HTML/CSS, Java
Software/Web Development: React.js/Next.js, Prisma, MongoDB, Express.js, Firebase, Flutter, Django, Docker
Data Science: Python with NumPy, Pandas, and scikit-learn; Web Scraping

Professional Experience

Berkeley National Laboratory   Berkeley, CA
Software Development Intern — High Performance Computing Team   June 2024 – Present
- Developing a user portal to manage superclusters for UC Berkeley and the Berkeley National Lab researchers. This portal replaces Google Forms and ticket workflows for account management
- Portal currently manages 5000+ users and 1000+ projects
- Primary tasks are in backend development, with heavy utilization of Django and Python

Stanford University   Stanford, CA
Student Researcher   April 2024 – Present
- Primary developer for research project which explores the potential of automated art feedback for artists
- Responsible for development of the drawing process (paper.js + React.js), data collection (MongoDB), and automated feedback (built entirely custom Javascript library which evaluates drawings based off perspective)
- Utilizes MERN stack with paper.js

Admitted   New Orleans, LA
Co-Founder, Full Stack Developer   June 2023 – April 2024
- Developing Admitted, a college prep service connecting high school students with college students, providing affordable access to high-quality essay reviews, resume reviews, and mock interviews
- Designed the UI/UX, including the layout, visual design, icons, and graphics
- Implemented RESTful API for financial transactions and an automated email communication system

Projects

Posers!   Stanford, CA
Full Stack Developer   December 2023
- Created a web game involving ML pose recognition from live webcam footage. The approximate positions of key body parts (elbows, shoulders, etc.) on the image are located, normalized, and compared to check whether the user is in the correct pose
- Application employs the AI framework MediaPipe for pose estimation

Access DB   Stanford, CA
Full Stack Developer   November 2023
- Developed, built, and designed a web application that uses Vector Search to recommend scholarships to college students with disabilities
- Searches use vector embeddings from OpenAI, with application powered by Next.js + TRPC + Prisma

Other Experience

Tulane University School of Science and Engineering   New Orleans, LA
Student Researcher   September 2020 – September 2021
- Co-authored [publication](#): *"Characterizing the role of Pdgfra in calvarial development"*
- Researched the underlying molecular mechanisms in craniofacial disorders using a mouse embryo model