

Dennis Lustre

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EDUCATION

University of California, Irvine

September 2020 - June 2024

Bachelor of Science in Computer Science, Specialization in Intelligent Systems

Irvine, CA

- **GPA:** 3.6/4.0 (7x Dean's List)
- **Leadership & Involvement:** Software Sub-Team Lead & Mentor for FUSION | ICS Student Council Projects Committee

EXPERIENCE

Software Developer

November 2023 - Present

ICS Student Council - [ZotMeal](#)

Irvine, CA

- **Led front-end development** by designing **Figma** mockups, creating Android and iOS compatible **React Native** components, and integrating with the back-end using **TRPC**
- **Sped up daily and weekly back-end services by 50%** by parallelizing async operations for all **AWS Lambda** functions
- **Slashed setup and teardown times for PostgreSQL integration tests by 30%** by adopting **Testcontainers** to simplify database test suites in **Vitest**
- **Built an events listing feature front-to-back** by utilizing **Cheerio** and **Axios** to scrape dining hall event data and display it on the app

Software Lead

November 2023 - Present

FUSION Engineering Project

Irvine, CA

- **Led the development of embedded systems software within a cross-functional team of 11 engineers** for a gesture-controlled robotic arm
- **Mentored 2 software developers, accelerating their onboarding process** by organizing workshops, code reviews, and coding sessions, fostering a culture of learning and collaboration
- **Designed a robust serial communication protocol over Bluetooth** between **Arduino** microcontrollers, enabling robot arm movements using flex sensors and servo motors

Software Engineer Intern

July 2023 - Present

Thaddeus Resource Center

La Verne, CA

- **Led a website overhaul that reduced operational costs by 78%, optimized site performance using static generation, and secured more valuable internships for the organization:** Pitched the project for CEO approval, transitioned from Webflow to **Next.js** and **Firebase**, led a team of 6 using **Agile** and **CI/CD** methodologies, and deployed as a **Docker** container to DigitalOcean
- **Reduced DevOps manual intervention by 100%** by creating a streamlined **CI/CD** pipeline with **GitHub Actions**, **PNPM**, and **Docker**
- **Accelerated CI execution times by 50%** through parallelizing **Jest** and **Playwright** test suites and caching dependencies

PROJECTS

Geospatial Web Game | *TypeScript, Python, Next.js* | [GitHub](#)

April 2024

- **Won 2 awards at Data@UCI's Atlantis Datathon: People's Choice and Best Use of Melissa API or Data Sets**
- **Developed a full-stack browser game in 24 hours** that utilizes a reverse geocoder API to generate geospatial clues for players to guess Orange County cities
- **Built a custom geospatial dataset** by cleaning and processing data with **pandas** to derive clues for 34 cities

NASA Radiation Microscopy Generative Model | *Python* | [GitHub](#)

March 2023 - June 2023

- **Furthered research on the effects of cosmic radiation on astronauts** by developing a Generative Adversarial Network with **PyTorch Lightning** to generate synthetic images that mimic irradiated cells
- **Classified images with 93% accuracy on a large subset of the domain** by leveraging ResNet101
- **Presented project results to NASA GeneLab scientists** after developing the project in **Agile** sprints

TECHNICAL SKILLS

Programming Languages: TypeScript/JavaScript, Rust, C/C++, Python, SQL, HTML, CSS/Tailwind CSS

Tech: React.js, React Native, Next.js, Node.js, ORM, MySQL, Postman, Cypress, AWS, Azure, Vercel, Firebase

Other: GitLab, Scrum, Jira/Kanban, Data Structures, Algorithms, Linux, Jupyter, Bash/Powershell, Shell Scripting