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 for FUSION Engineering Project 23-24 | ICS Student Council Projects Committee

Experience

Software Developer November 2023 - Present
ICS Student Council - ZotMeal *Irvine, CA*

- **Led frontend development** by designing **Figma** mockups, creating **React Native** components, and integrating with the backend using **TRPC**
- **Sped up daily and weekly backend 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 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 **Cypress** test suites and caching dependencies
- **Significantly improved code maintainability** by converting codebase from **JavaScript** to **TypeScript**, integrating **Zod** to ensure robust type safety, and achieving **100%** adoption rate by leading a workshop for the development team
- **Reduced total lines of code by 50% (over 700 lines)** by engineering an efficient approach for a **React Native** app, using **React** components to dynamically render and populate 25+ screens
- **Pioneered the introduction of testing practices:** Took initiative by implementing a **Jest**-based testing environment and authoring clear documentation for testing procedures to foster a culture of quality assurance within the team

Projects

Geospatial Web Game | *TypeScript, Python, Next.js* | GitHub April 2024

- **Won 2 awards at Data@UCI's Atlantis Datathon 2024: 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, Docker, Postman, Cypress, AWS, Azure, Vercel, Firebase
Other: GitHub/GitLab, Agile (Scrum), Jira (Kanban), GitHub Actions, Linux, Jupyter, DigitalOcean, Bash/Powershell