# 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*

- **Streamlined full-stack development, increased scalability, and reduced maintenance overhead** by restructuring the monorepo to use **Turborepo**, **AWS Lambda**, and **T3 Stack (TypeScript, Prisma, tRPC)**
- **Improved backend performance and scalability** for an **API** consisting of 10+ functions by transitioning from **Prisma** to **Drizzle**; Simplified codebase and data validation processes by leveraging **Drizzle**-generated **Zod** schemas
- **Built an events listing feature** by utilizing **Cheerio** and **Axios** to scrape dining hall event data and utilized **Prisma** to store the events in a serverless **PostgreSQL** database
- **Increased backend reliability by maintaining 100% test coverage on assigned features** by writing unit tests and transactional database integration tests with **Vitest**

**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

**Aim Trainer Web Game** | *JavaScript, React.js, Firebase* | GitHub August 2023 - September 2023

- **Optimized load times resulting in a 66% improvement in First Contentful Paint (FCP) and an 81% improvement in Largest Contentful Paint (LCP)** by module bundling with **Vite**
- **Implemented user authentication and cloud database** with **Firebase** Authentication and Cloud Firestore
- **Automated the build and deployment pipeline for efficient publishing to GitHub Pages** by leveraging GitHub Actions

**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/TailwindCSS, Bash
**Tech**: React.js, React Native, Next.js, Node.js, Prisma, PostgreSQL, Docker, Postman, Cypress, AWS, Azure, Firebase
**Other**: GitHub/GitLab, Agile (Scrum), Jira (Kanban), CI/CD (GitHub Actions), Linux CLI, Jupyter, DigitalOcean