

# 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: 3.56 (5x Dean's List)
- Selected Coursework: Algorithms, Data Structures, Web Crawling, Project in AI, Machine Learning and Data Mining, Computational Photography and Vision

## TECHNICAL SKILLS

**Programming Languages:** Python, C++, JavaScript, HTML/CSS, Bash

**Technologies and Frameworks:** React.js, React Native, Firebase, Jest, PyTorch, NumPy, Matplotlib

**Developer Tools:** Git, VSCode, Eclipse, Linux CLI, Jupyter Notebook, Agile/Scrum, Jira/Kanban

## EXPERIENCE

### Software Engineering Intern

July 2023 – Present

*Thaddeus Resource Center*

*La Verne, CA*

- Engineered a unique approach using **React** components to programmatically render and populate 25+ screens, resulting in a **50%** reduction in lines of code (over 700 lines) and a **69.44%** decrease in screen modules (from 36 to 11)
- Significantly improved codebase organization and maintainability by migrating static data to a centralized data directory, authoring comprehensive documentation detailing the structure of the JSON objects, and achieving **100%** docstring coverage for the app's completed modules
- Pioneered the introduction of testing practices, demonstrating initiative by setting up a **Jest**-based testing environment; authored clear documentation for testing procedures to further foster a culture of quality assurance within the team
- Served as a mentor for new interns by facilitating their onboarding with environment setups and the app repository

## PROJECTS

### NASA Radiation Microscopy Generative Model | *Python, PyTorch Lightning, Boto3, WandB*

June 2023

*ML pipeline designed to augment NASA's BPS Microscopy Dataset on AWS with synthetic radiation images*

[GitHub](#)

- Developed a Generative Adversarial Network with **PyTorch Lightning** to generate synthetic images that mimic irradiated cells and further research on the effects of cosmic radiation on astronauts
- Leveraged ResNet101 to classify images with **93%** accuracy on the original dataset
- Developed the project in Agile sprints and successfully presented project results to NASA GeneLab scientists

### Aim Trainer | *JavaScript, React.js, Firebase, HTML, CSS*

August 2023

*Browser game designed to train the aiming skills of FPS game enthusiasts*

[Demo](#) | [GitHub](#)

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

### Tic-Tac-Toe Discord Bot | *JavaScript, Discord.js, HTML, CSS*

September 2023

*Discord bot that integrates a multiplayer game into servers*

[GitHub](#)

- Devised and implemented a novel solution for the game interface by using **Puppeteer** API for dynamic image rendering in response to user messages
- Conducted comprehensive code reviews with a partner, proactively identifying and eliminating critical bugs to enhance code quality and improve software reliability
- Implemented continuous integration and deployment using Git version control