Ethan Lee

(626)-261-8137 | ethanplee24@gmail.com | linkedin.com/in/ethan-p-lee

Education

University of California Los Angeles Los Angeles, CA

Bachelor of Science in Computer Science *Sep. 2023 - June 2027*

- Relevant Coursework: Data Structures and Algorithms, Intro to Computer Organization, Software Construction, Discrete Mathematics, Linear Algebra and Applications, Machine Learning

Experience

Bruin Plan | MongoDB, Express, React, Node.js, Passport.js, JavaScript April 2025 - May 2025

Project Lead *Los Angeles, CA*

- Engineered **full-stack** app with **Node.js** and **React** to optimize schedules using **188** UCLA course entries
- Configured **MongoDB** database with **IP whitelisting** and role-based access, enabling **cloud** collaboration
- Integrated **Google OAuth 2.0** with **Passport.js** and **RESTful** login routes, securing **500+** user accounts
- Developed optimization algorithm using **JavaScript** to prioritize class time, instructor ratings, and workload

Automated Pet Feeder Web App | C++, Firebase, React, JavaScript, Express May 2024 - June 2024

Backend and Electronics Team Member *Los Angeles, CA*

- Developed **REST APIs** to manage **real-time** feeder control and updates between frontend and hardware
- Established SSL-encrypted Wi-Fi connection between web app and pet feeder using **Arduino** WiFi library
- Managed hardware integration by wiring the **Arduino** system to servo motors, water pump, and sensors

Projects

Journal Buddy | Next.js, TypeScript, Supabase, PostgreSQL, OpenAI June 2025 - August 2025

- Developed **full-stack** journaling platform using **Next.js**, **TypeScript**, and **Supabase**, supporting **300+** users
- Designed frontend with reusable **Tailwind** and **Recharts** components resulting in **40%** faster dev cycles
- Integrated **OpenAI** and **Pinecone** vector search to process **1,000+** entries, increasing engagement by **60%**
- Deployed on **Vercel** with **CI/CD** + **NextAuth.js**, reducing deployment time by **80%** w/ **99.9%** uptime

Digit Classification Model | PyTorch, Python, CNNs, Data Augmentation Oct. 2024 - Dec. 2024

- Engineered custom CNN for digit recognition with **99.9%** accuracy on MNIST dataset using **PyTorch**
- Visualized **training metrics** using **Matplotlib** to improve model performance by **15%** during testing phase
- Created data augmentation pipeline using **PyTorch** to enhance model generalization and reduce overfitting

Published Video Games | *Unity, C#, C++, Git, Github* Sep. 2023 - March 2024

- *Frogs Go Nuclear*: 2D Platformer developed in Unity
  - Led a team of **5** developers, assigning tasks and fostering open communication to drive success
  - Leveraged **C#** and **Unity** to implement robust user-controlled mechanics and interactive elements
  - Streamlined collaboration with **50+** Git/GitHub commits, ensuring version control and code quality
- *Marble Madness:* 2D Dungeon crawler developed in C++
  - Custom-level creation/loading system, discrete collision detection, and sprite-based graphics
  - Designed **10** enemy and interactive type elements using **polymorphism** to enhance gameplay
  - Reduced redundancy to streamline code by **20%** by integrating inheritance-type game architecture

Technical Skills

Languages: C++/ C#, TypeScript, JavaScript, Python, HTML/ CSS

Frameworks: React, Express, Next.js

Tools: Git, Docker, Google Cloud Platform, VS Code, Unity, Unreal Engine, Linux, Vercel, Node.js, AWS

Libraries: PyTorch, TensorFlow, Matplotlib, pandas, Selenium