

# Eugene Cho

[eugene.a.cho@gmail.com](mailto:eugene.a.cho@gmail.com) | [eacho.me](https://eacho.me) | [Linkedin](#) | [GitHub](#)

## EDUCATION

### University of California, Davis

Bachelor of Science in Computer Science and Managerial Economics

Davis, CA

Sep. 2022 – Present

## EXPERIENCE

### Seoul National University Medical School

Bioinformatics Research Intern

Jun. 2024 – Sep. 2024

Seoul, Korea

- Researched cancer clonal model determination using monoallelic expression of inactivated genes at the Genomic Medicine Institute at SNU Medical School under Professor Kim Jong Il
- Specialized in analyzing and visualizing large-scale DNA data, utilizing outputs from MuTect2 and HaplotypeCaller
- Developed Python scripts to perform advanced analyses and visualizations on processed data of over **10 million** lines of data

### PNA Bio Inc.

Software Engineer Intern

Sep. 2023 – Jan. 2024

Thousand Oaks, CA

- Developed the [PNA Designer Tool](#), a Python algorithm that selects optimal sequences based on parameters like length, melting temperature, purine content, and self-complementarity
- Developed the [Donor Designer](#), an algorithm designed to generate customized DNA sequences with targeted mutations that create restriction enzyme sites, optimized specifically for donor design in CRISPR/Cas9 research applications

### CIMPLRX

Chemoinformatics Intern

Jun. 2022 – Sep. 2022

Seoul, Korea

- Engineered databases on a Linux server with MySQL to categorize compounds crucial for advanced drug screening processes

## EXTRACURRICULARS

### AggieWorks

Software Developer

Sep. 2024 – Present

Davis, CA

- Developed [Cattlelog](#), a course recommender tool that attracted over **1000** unique users at peak usage
- Collaborated with a team of **8** with software engineers, product managers, and designers in a cross-functional team
- Deployed REST API and PostgreSQL database on VPS, utilizing Docker and GitHub Actions to establish a CI/CD pipeline
- Implemented advanced caching strategies reducing load times by **90%** (from 20s to 2s) and decreasing API calls by **99%**

## PROJECTS

### ResilientFiles | [React](#), [TypeScript](#), [ResilientDB](#), [IPFS](#), [FastAPI](#), [Docker](#)

Dec. 2024

- Directed a team of **4** software engineers to develop a full-stack decentralized file storage system integrating IPFS and ResilientDB as the final project for ECS189F
- Designed and implemented **5+** API endpoints, including file storage, retrieval, and ownership transfer
- Recognized as one of the top projects in the course, leading to official adoption by the ResilientApp organization for continued development and integration into decentralized application ecosystems

### Korean Quiz | [React](#), [Hangul](#), [Sqlite3](#), [Express](#)

Sep. 2024

- Developed a full-stack web application to test Korean vocabulary and spelling, utilizing SQLite3 for database management

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, C#, Kotlin, SQL, JavaScript, TypeScript, HTML/CSS, R, GDScript, Perl, PostHog

**Frameworks & Libraries:** React, Node.js, FastAPI, Express, Vercel, Render, Sqlite3, Pandas, NumPy, Matplotlib, Seaborn, Plotly, Scikit-learn, Dash, JSON, Unicorn, ResilientDB, IPFS, Django

**Developer Tools:** Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse, Android Studio, R Studio, Unity, Godot, VirtualBox, Ubuntu, DBeaver

**Relevant Coursework:** ECS 36C Data Structures and Algorithms, ECS 122A Algorithm Design and Analysis, ECS 154A Computer Architecture, ECS 150 Operating Systems

**Awards:** Eagle Scout Award, ACSL Intermediate Division Finalist, Ventura County Fire Department Citizen Award