

Eugene Cho

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EDUCATION

University of California, Davis

Sep. 2022 – Present

Bachelor of Science in Computer Science and Managerial Economics

EXPERIENCES

AggieWorks

Sep. 2024 – Present

Software Developer

Davis, CA

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

Seoul National University Medical School

Jun. 2024 – Sep. 2024

Bioinformatics Research Intern

Seoul, Korea

- Processed and analyzed large-scale bulk **RNA-seq** datasets, integrating variant data from **MuTect2** and **HaplotypeCaller** to identify mutations in cancer samples
- Developed Python scripts for large-scale genomic data processing (**10M+** data points), utilizing Pandas, NumPy, and Scipy for data manipulation

PNA Bio Inc.

Sep. 2023 – Jan. 2024

Software Engineer Intern

Thousand Oaks, CA

- Designed and built full-stack bioinformatics tools [PNA Designer Tool](#) [↗](#) and [Donor Designer](#) [↗](#), using a PHP frontend, Python backend for sequence analysis, and dynamic form handling via **POST** requests
- Implemented secure temporary file handling and server-side execution of Python scripts for real-time processing of DNA sequences; output dynamically rendered as HTML
- Built and maintained a PHP-Python pipeline on a Linux/Apache stack, integrating custom CGI scripts, HTML/CSS, and shell command execution to support CRISPR donor design workflows

PROJECTS

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

Dec. 2024

- Directed a team of **4** students to develop a full-stack decentralized file storage system integrating IPFS and ResilientDB as the final project for Distributed Ledgers
- 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

[Korean Quiz](#) [↗](#) | *React, Hangul, Sqlite3, Express.js*

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

Frameworks and Libraries: React, Node.js, Next.js, Express.js, Tailwind, Pandas, NumPy, Matplotlib, Seaborn, Plotly, Scikit-learn, Dash, FastAPI, ResilientDB, IPFS, Django

Database and Cloud: PostgreSQL, SQLite, MySQL, DigitalOcean, Oracle Cloud

Developer Tools: Git, Github Actions, Docker, Bash, Linux, Ubuntu, DBeaver, Posthog

MISCELLANEOUS

Relevant Coursework: Data Structures and Algorithms, Algorithm Design and Analysis, Computer Architecture, Operating Systems, Distributed Ledgers, Databases, Bioinformatics

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