

# Eugene Cho

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## EDUCATION

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### University of California, Davis

Sep. 2022 – Present

*Bachelor of Science in Computer Science and Managerial Economics*

## EXPERIENCES


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### 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

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### 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

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**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

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**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