

Felipe Gil

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Education

University of San Diego, Shiley-Marcos School of Engineering, San Diego, CA

B.S. Computer Science, B.A. Mathematics

Expected Graduation: May 2026

Cumulative GPA: 3.96/4.0

Relevant Coursework

Mathematical Foundations for Machine Learning | Linear Algebra | Data Structures and Algorithms | Computer Systems | Advanced Computational Problem Solving

Experience

Multi-Platform Mobile App

June 2024 - Present

- Collaborated with a team to develop a multi platform(ios and android) personal knowledge management mobile app.
 - Developed with Kotlin multi platform for business logic, Kotlin compose for UI, Lucene for search/indexing, Kotest and Mockito for mocking, unit, and integration testing, and Gradle, npm, maven for build automation and dependency management.
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Projects

Computer Memory Simulator

Fall 2023

- Using C programming, modeled the functionality of DRAM and Cache systems.
- Engineered read/write operations and implemented cache algorithms such as LRU and FIFO.
- Leveraged C programming skills, including pointer manipulation, dynamic memory allocation, and bitwise operations.

Dimensionality Reduction, PCA

April 2024

- Generated a noisy dataset and applied centering techniques.
- Calculated eigenvalues and eigenvectors to determine the principal components and their corresponding proportions of variance.
- Analyzed the proportions of variance represented by each principal component to understand the data's underlying structure.

Machine Learning Classification of Noisy Images

May 2024

- Developed a machine learning pipeline to classify noisy 5x5 images into naughts and crosses using the Scikit-learn MLP classifier.
 - Trained an MLP classifier with various hyperparameters, including activation function (relu) and solver (lbfgs).
 - Evaluated the classifier's performance using confusion matrices and accuracy scores for both training and testing datasets.
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Skills & Tools:

Technical: Python | Java | C | Kotlin | Kotest | JS | React | HTML | Scss | Bash | Git | unit/integration/mock testing | Math | Gradle | npm | Maven

Soft: Exposure to professional dev environment | Code Reviews | Collaboration