Changseok (Kevin) Lim

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EDUCATION

University of California, Berkeley **Aug 2022 - Dec 2025**
Bachelor of Arts, Data Science Berkeley, CA
GPA: 3.66/4.00

Coursework: Data Engineering, Data Structures, Principles and Techniques of Data Science, Probability for Data Science, Machine Learning

EXPERIENCE & RESEARCH

Undergraduate Research Assistant **May 2024 - Present**
Model Predictive Control Lab *Berkeley, CA*

- Co-authored "Learning Two-agent Motion Planning Strategies from Generalized Nash Equilibrium for Model Predictive Control", accepted to the 2025 Learning for Dynamics and Control (L4DC) conference.
- Created and fine-tuned neural networks using PyTorch, achieving a 15% boost in predictive accuracy via hyperparameter optimization and model selection.
- Implemented a decentralized algorithm that reduced computational complexity by 25%, enabling real-time control with a prediction horizon of 10 steps and sampling time of 0.1 seconds.
- Collaborated on developing the Implicit Game-Theoretic Model Predictive Control (IGT-MPC) algorithm, achieving at least a 97% feasibility rate across 8 different multi-agent motion planning scenarios.

Software Engineer **May 2025 - Present**
StylistGem *Remote*

- Developed and deployed a full-featured user management system using FastAPI and SQLModel, supporting role-based access, password hashing, and secure Auth0 authentication for over 5 user types.
- Designed and implemented 10+ modular SQLModel-based data models (e.g., Booking, Payment, Review, Notification, Contact) using FastAPI, enabling seamless CRUD operations and clean relational mappings.
- Engineered a robust data layer for a multi-service booking platform by designing 10+ normalized SQLModel schemas (e.g., Booking, Payment, Review, Notification, Item, Dependent), optimizing for data consistency and relational integrity.

PROJECTS

CIFAR-10 Image Classification with Transfer Learning | *Python, PyTorch* **Mar 2025 - Apr 2025**

- Fine-tuned a pre-trained convolutional neural network (CNN) on the CIFAR-10 dataset using transfer learning, achieving 85% test accuracy by training only the classifier head (200K vs. 11M parameters).
- Accelerated training by 60% through frozen feature extractor techniques; standardized 60,000 images using channel-wise normalization.
- Preprocessed and cleaned 60,000 CIFAR-10 images, standardizing pixel intensities with channel-wise normalization to ensure stable training and faster convergence.

Cloud Resume Project | *Python, Azure, HTML, CSS* **Dec 2024 - Jan 2025**

- Developed and implemented a serverless Azure Function API to track and display real-time visitor count, utilizing Azure Table Storage to handle data persistence with 99% uptime.
- Automated the infrastructure deployment using Terraform, reducing manual configuration time by 80% and ensuring repeatability and scalability of Azure resources.
- Deployed a responsive static website to Azure Static Web Apps, serving over 150+ visitors with integrated CI/CD pipelines using GitHub Actions to automate deployment and updates.

Spam Email Classification | *Python, scikit-learn* **Jan 2025 - Feb 2025**

- Built a machine learning model achieving 98% accuracy on email classification using Support Vector Classification (SVC) and TF-IDF vectorization.
- Engineered 40+ features, including keyword frequency, special character count, and capitalization patterns, improving performance by 20%.
- Applied One-Hot Encoding and bag-of-words to preprocess 8,348 labeled email samples

SKILLS

Programming Languages: Python, Java, R, SQL, Linux, HTML, CSS
Databases: SQL, MongoDB
Frameworks & Tools: PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, Seaborn, Git, Microsoft Office, Carto
Cloud & DevOps: Microsoft Azure, AWS, GitHub Actions
Languages: English, Korean