Phoenix Toan Pham

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EDUCATION

University of California, Berkeley August 2022 – May 2026

- Computer Science & Applied Mathematics, B.A.
- **3.71 GPA**

EXPERIENCE

Neural Systems & Machine Learning Lab Affiliate | Lawrence Berkeley National Laboratory | Berkeley, CA (Incoming)

- Will work on a project applying Dr. Bouchard's lab's **Dynamical Components Analysis (DCA)** and **Compressed Predictive Information Coding (CPIC)** algorithms to videos to understand their temporal structure. This work will contribute to anticipated RFA from NSF/DoE/NIH and DOD.

Data Science Intern | IDXExchange | Meridian, ID May 2025 - Present

- Developing an **ML system** to predict residential property closing prices using California MLS data, including data cleaning, feature engineering, and training regression models (e.g. **Random Forest, Extreme Gradient Boosting**).
- Evaluate model performance using R^2 and error metrics, and represent key findings/predictions to stakeholders

Software Backend Engineer | Stealth beauty-tech startup "StylistGem" May 2025 - Present

- Built the core **FastAPI** service for a Booksy-style booking platform, designing secure CRUD routes for technician and customer profiles with **Pydantic** validation and **JWT** authentication.

Machine Learning Engineering Intern | Mentia | San Francisco, CA January 2024 - September 2024

- Assist people living with Dementia through AI/ML, via an interactive game called DevaWorld
- Tasked with goal of developing/training a machine learning model to predict the players' actions/engagement
- **Extracted**, **cleaned**, **classified**, and validated **2000+ video data** in **Vertex AI** to create training dataset, using metrics (e.g. **Fleiss' kappa**) to measure data consistency using labeling guidelines I constructed
- Evaluated ML models with **CNN-RNN** architecture, using **TensorFlow**/**Keras** and **pandas** on training set.

RELEVANT PROJECTS

CS 189, Introduction to Machine Learning | UC Berkeley

Project: Intuition Behind a Convolutional Neural Network

- Built a **CNN from scratch** using only **numpy** functions, implementing core components including **convolutional**, **linear**, and **activation layers** to classify the Iris dataset
- Used **PyTorch** to **train CNNs** on Fashion MNIST. Applied **transfer learning** to **fine-tune** a pre-trained model for CIFAR-10 classification

DATA 100, Principles & Techniques of Data Science | UC Berkeley

Project: Exploring & Predicting Housing Prices in Cook County

- Built **OLS regression models** to predict fair market housing prices and identify system overassessment of low-value homes. Applied **data cleaning**, **feature engineering** & **selection** to improve model accuracy

CS 61B, Data Structures | UC Berkeley

Project: Build Your Own World

- Fully developed a video game from scratch in **Java**, working through every stage of game development.
- Utilized **A*** & **data structures** to create world seed. Implemented game features for user interactivity.

TECHNICAL SKILLS

- Python, Java, C, SQL, TensorFlow/PyTorch/scikit-learn
- Linear Algebra, Multivariable/Vector Calculus, Probability
- EDA, Research Analysis, Technical Writing
- Critical Thinking, Complex Problem Solving