# Lyndon Yang

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# **EDUCATION**

# UC Berkeley, College of Engineering

Berkeley, CA

Bachelor of Science in Electrical Engineering and Computer Science

Expected May 2026

- GPA: 4.00
- Honors: Eta Kappa Nu, Tau Beta Pi
- Relevant Coursework: The Structure and Interpretation of Computer Programs, Data Structures, Discrete Mathematics and Probability Theory, Designing Information Devices and Systems I & II, Linear Algebra & Differential Equations, Computer Architecture, Computer Security, Efficient Algorithms

# EXPERIENCE

#### University of California, Santa Barbara

 $June\ 2022-August\ 2022$ 

Research Intern under Professor Ryan Solgi - Summer Research Academy

Santa Barbara, CA

- Researched AI applications for detecting Coronary Artery Disease (CAD) risks using both non-intrusive and intrusive medical data
- Developed a robust data pipeline, trained and fine-tuned various machine and deep learning models, including LR, KNN, SVM, RF, and FNN
- Achieved a recall score of 83.33% and an AUC of ROC score of 94.90%.
- Published a 10-page research paper and presented at a formal capstone seminar

#### University of California, Los Angeles

June 2021 – August 2021

Virtual

Research Intern

- Explored ML applications for stroke patient analysis
- Implemented and tuned machine learning models, including LR, KNN, and SVM
- Achieved recall score of 86.8% and AUC of ROC score of 85.7%
- Presented at a course project seminar and was nominated for best course project among 18 teams

## PROJECTS

#### Breast Cancer Ultrasound AI | Python, PyTorch, TensorFlow, Keras, Streamlit

2024

- Developed an image segmentation and classification algorithm to detect breast cancer from ultrasound images using deep learning and computer vision
- Implemented a custom DeepLabV3+ with ResNet50 backbone for generating masks and fine-tuned ResNet152 for classification
- $\bullet$  Created a multi-model pipeline that generates overlaid mask images with DeepLabV3+ and performs predictions on the outputs with ResNet152
- Deployed the final model on a web app built with Streamlit, achieving a testing accuracy of 98%

## Quantitative Ensemble Cancer Detection | Python, TensorFlow, Scikit-Learn, XGBoost

2024

- Applied AI with ensemble learning to classify tumors based on numerical data
- Trained and tested over ten machine learning models, including LR, SVM, KNN, RF, XGBoost, NB, DT, GB, AB, ET, DNN
- Applied ensemble and stacking techniques to improve model performance
- Achieved an average accuracy of 97.37%, precision of 97.61%, recall of 95.35%, and F1 score of 96.47%

#### Tumoraid | LangChain, PIL, FastAPI, Docker, AWS ECS, OpenAI API, Streamlit

2024

- Developed a web app on Render, integrating a context-aware LLM with LangChain and OpenAI API to deliver multimodal, empathetic breast cancer support via few-shot prompting and integration of multiple AI models
- Deployed 3 Dockerized AI models on AWS ECS via REST APIs for real-time tumor analysis and data integration.
- Enabled image and tabular data uploads for tumor assessments with continuous conversational context.

#### TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (PostgreSQL), JavaScript, HTML/CSS, Scheme

Developer Tools: Git, GitHub, VSCode, Visual Studio, PyCharm, IntelliJ IDEA

Libraries & Frameworks: TensorFlow, Keras, PyTorch, Scikit-Learn, OpenCV, React, Next.js, Node.js, FastAPI, REST, Firebase, Pandas, NumPy, Matplotlib, Seaborn, OS, LangChain, Docker