JUSTINA LAM

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EDUCATION

University of Pennsylvania — Philadelphia, PA
Dean's List; Bachelor's and Master's (BSE + MSE) in Computer Science — *Sept. 2021 – May 2025, GPA: 3.68*

Cherry Hill High School East — Cherry Hill, NJ
Valedictorian, AP Scholar with Distinction — *Sept. 2017 – May 2021, GPA: 4.00*

TECHNICAL TOOLS

Languages: Python, Java, JavaScript, Go, C/C++, R, Linux shell scripting, XML, HTML/CSS, OCaml
Data & Machine Learning: PyTorch, TensorFlow, Keras, Hugging Face, Scikit-Learn, Hail, NumPy, Pandas
Cloud & DevOps: AWS, MongoDB, SQL, Docker, Kubernetes, Istio, Envoy, Azure APIM, Git
Web: ReactJS, NodeJS, Express, Flask, Django

EXPERIENCE

Software Engineer Intern — May 2023 – Aug. 2023
UiPath, Inc. — *Bellevue, WA*

- Developed and deployed a reverse proxy API request routing pipeline, using an Istio service mesh on Kubernetes clusters
- Achieved substantial reductions in latency, network hops, and resource costs, to optimize system performance
- Fine-tuned a large language model (LLM) to resolve customer bug tickets, along with a full-stack UI

Machine Learning Undergraduate Researcher — May 2022 – Aug. 2022
Penn Center for Neuroengineering and Therapeutics — *Philadelphia, PA*

- Trained an NLP model for question-answering and text classification, to predict epilepsy patient diagnoses from discharge summaries with up to 87.06% accuracy, exploring strategies for data augmentation and hyperparameter tuning
- Analyzed correlation of medication dosage and other variables with successful seizure induction in epilepsy patients, offering insightful data visualization, using a pharmacokinetic absorption model

Genomic Data Analytics Undergraduate Researcher — Jan. 2022 – Present
Penn Neurodegeneration Genomics Center — *Philadelphia, PA*

- Identified genotype features characteristic of Alzheimer's disease, using open-source computational and bioinformatics tools
- Performed colocalization studies to evaluate expression levels of genes linked to Alzheimer's disease

PROJECTS

Recurrent Neural Network for Flooding Prediction | *Python, TensorFlow, Flask*

- Built an RNN model to predict urban flooding, trained on pre-processed time series data from a federal database
- Developed a full-stack interactive web application for dynamic visualization of data and predictions, using Flask

Cloud-Based Social Networking Platform | *AWS DynamoDB, JavaScript, ReactJS, NodeJS, Git*

- Designed a social media platform as a cloud-based web application modeled after FaceBook
- Enabled users to send messages with dynamic updates, add friends, create posts, and view suggested news articles

Spotify API Song Recommender | *Python, Scikit-Learn, Django, ReactJS*

- Designed a full-stack web application accessing the Spotify API to display a list of recommended tracks, generated based on cosine similarity to a feature vector constructed from the user-inputted Spotify playlist

Brain MRI Image Classification via Convolutional Neural Network | *Python, Keras*

- Trained and evaluated a CNN model for image classification of brain MRI scans to detect and identify brain tumors

Machine Learning for Heart Failure Prediction | *Python, Scikit-Learn*

- Implemented and evaluated several ML algorithms to determine the likelihood of heart failure with 87% accuracy

RELEVANT COURSEWORK

Algorithms: Machine Learning · Machine Perception · Algorithms · Data Structures and Algorithms
Systems: Operating Systems Design and Implementation · Computer Systems · Automata, Computability, Complexity
Networks: Networks and Security · Scalable and Cloud Computing · Internet and Web Systems · Databases
Math: Probability · Mathematical Foundations of Computer Science · Multivariable Calculus and Linear Algebra
Specialized Interests: Molecular Biology and Genetics · Molecular Biology · Macroeconomics · Corporate Finance