Lauren N Pryor

Computer Science, Business Economics and Management @ Caltech

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https://github.com/laurenx1

EDUCATION

09/2022 – 06/2026
Pasadena, United States

California Institute of Technology (Caltech)
Bachelor of Science: Computer Science (Machine Learning and Vision track), Business, Economics, and Management (BEM), minor in Environmental Science & Engineering
Clubs & Teams: Black Student Union, Caltech Track & Field, Peer Advocate,
Awards: National Center for Women & Information Technology Aspirations in Computing Award (2020, 2021)
Affiliations: BSEC, BSU, Rewriting the Code (RTC), Women in Technology (NCWiT)

PROFESSIONAL EXPERIENCE

06/2023 – 08/2023
New York City

Music and Auditory Research Lab (MARL) @ NYU
Research Intern - NSF Fellowship
- Used EPIC KITCHENS dataset (including data from first-person vision, audio-visual recordings in native environments, totaling to over 100 hours of footage) to model correlation between audio and visual data with machine learning models (XMem, CLIP, GPT-4).
- Created the Epic Kitchens United python package to better feed data into these models, also provided critical research on the capabilities of AudioCLIP. Code and python package will be used for predictive maintenance, as well as improving the capabilities of augmented reality & virtual reality (AR/VR) technology, spacial audio, and music information retrieval.

08/2020 – 06/2022
Remote

The Knowledge Society
Project Manager
- Enhanced consulting and project management skills by leading a hackathon competition team of 4 in sustainability and business analytics, presented research to Shell Oil Company executives.
- Competed in and won challenges judged by United Nations for the improvement of education and entrepreneurship of women in rural Senegal
- Competed and won in global hack-a-thons judged by executives in biotech, for neural networks predicting cytokine storms in the human inflammatory system in response to COVID-19 and Idiopathic Pulmonary Fibrosis

05/2021 – 09/2021
Remote

Georgia Institute of Technology
Data Science Researcher
- Expanded upon previous research of the human inflammatory system for further application into other diseases such as heart failure.
- Performed research into these study topics to increase knowledge and to provide valuable contributions
- Wrote and published in a peer-reviewed journal regarding machine learning models for predicting heart failure
- Generated RNN and LSTM data models with accuracy rates of 80% and above, performed predictive analysis and helped produce reports outlining results including publication in Journal of Student Research

PROJECTS

2022

AI Research
Designed LSTM (long-term short memory) models to predict cytokine storms in patients with Idiopathic Pulmonary Fibrosis by noticing similarities between COVID-19 inflammatory response and other diseases.

2022

AI Research
Applied above research in new way by building RNN (LSTM) to predict heart failure and fatality in patients with Congestive Heart Failure (Python).

2023

Physics Engine & Mario/Pacman Style Game Development
Created a pacman-style game using C and POSIX APIs. Game features include, an enemy bot that stalks the player, keyboard handling, a randomly generated board for each playthrough with several types of obstacles, and a fully built physics engine.

2023

Othello Bot
Coded Othello (strategy board game) game bot, using both Minimax and AlphaBeta algorithms as implementation methods.

2023

File Parsing, DNA Sequencing
FASTA file DNA sequence parsing to search for genetic mutations, specifically single nucleotide substitutions (SNPs) and ultimately create a phylogenetic tree.

SKILLS

Programming Languages / Frameworks
Python, Java, C/C++, POSIX APIs, Visual Studio Code, IntelliJ IDEA, SQL, noSQL, LaTeX

Machine Learning / Data Analysis
pandas, numpy, TensorFlow, Pytorch, data visualization, Matplotlib

Coursework
Mathematical Foundations of Computer Science, Computing Systems, Software Design, Data Structures & Dynamic Programming