Gordon Lu

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Education

University of Pittsburgh, Honors College **August 2018 – May 2022**

Bachelor of Science in Computer Science, Economics, Mathematics, Statistics *GPA: 4.0/4.0*

Relevant Coursework

- Algorithms
- Machine Learning
- Deep Learning
- Computer Organization
- Systems Programming
- Operating Systems
- Data Science
- Database Management
- Computer Vision
- Calculus III
- Discrete Mathematics
- Theoretical Calculus
- Linear Algebra
- Differential Equations
- Financial Econometrics
- Mathematical Statistics
- Probability Theory
- Applied Regression
- Statistical Learning
- Financial Economics
- Game Theory
- Microeconomics
- Macroeconomics
- Econometric Theory

Experience

University of Pittsburgh **August 2019 – Present**

Undergraduate Teaching Assistant *Pittsburgh, PA*

- Was a teaching assistant for: CS 0007, CS 0401, CS 0447, CS 0449, CS 1555, ECON 0110, ECON 1100, ECON 1440 and STAT 1331.
- Curated lab materials and developed grading scripts using Python and Bash scripts.
- Instructed weekly recitations and held numerous review sessions to explain complex topics.

Lumentum Holdings Inc. **May 2019 – August 2019**

Quality Engineer Intern *San Jose, CA*

- Optimized and developed SQL and Python scripts to retrieve and filter data.
- Used ODBC drivers to establish connection with databases and Python.
- Implemented WinSPC software to monitor and provide fast, efficient data analysis.
- Developed an auto-reporting system to monitor C_{pk} and P_{pk} values.

Premium Technology Inc. **May 2018 – August 2018**

Software Engineer Intern *New York City, NY*

- Lead developer in website: **premiumit.com**
- Aided in research to provide continuous improvement on the supply chain system, to simplify the ease of usage on client-side.

Projects

PittTours | *Java, PostgreSQL, JDBC* **November 2020**

- Implemented an imaginary flight reservation system.
- Developed a set of triggers, procedures and ACID transactions in PostgreSQL.
- Utilized Dijktra's Algorithm and other graph algorithms to find the routes between cities in Java.

Automated Hyperparameter Tuning | *Matlab* **April 2021**

- Used Bayesian Optimization to find optimal hyperparameters to enhance accuracy for an image classification task.
- The Bayesian Optimization was performed on a classification network and a fine-tuned transformer after data augmentation.
- This improved accuracy on the testing data and reduced overfitting on the training data.

Pokémon Trainer | *Python* **April 2021**

- Implementated reinforcement learning using Deep Q-Learning and an epsilon-greedy policy to win Pokémon battles.
- The model achieved a win rate of 0.95 to other novel approaches.

Technical Skills

Languages: Python, Java, C/C++, R, HTML/CSS, SQL, MIPS, x86, Matlab, Haskell
Libraries: PyTorch, TensorFlow, Keras, scikit-learn, Natural Language Toolkit, pandas, numpy, matplotlib
Statistical Software: Stata, JMP, Minitab
Other: Linux, GitHub, VS Code, Atom

Leadership / Extracurricular

Business Manager, Computer Science Club May 2020 – May 2021
President, Data Analytics Through Applied Statistics May 2021 – Present
Business Manager, Pitt Math Club May 2021 – Present