1999jasontang@gmail.com
1999jasontang.github.io
github.com/JasonTang99
(647) 974-6485

Jason Tang

Education

University of Toronto September 2017 - June 2021
Honors Bachelors of Science, *Computer Science (Mathematics Minor)* *CGPA 3.86/4.00*

Professional Experience

Software Development Engineer July 2021 - Present
Amazon

- Constructing a modernized microservices-based React workflow summarizing shipment details for independent vendors to track inbound shipments to Amazon.
- Exploring approaches in using predictive analysis to automatically set individual shipping preferences based on past behavior to reduce seller workload.
- Managing a yearly budget of $150,000 to scale compute units in accordance to peak traffic events and long-term shifts in service usage based on maximum compute host capacities found through load testing experiments.
- Spearheading the development of customer access and deletion tools for personal data in existing databases in accordance with emerging data privacy laws.
- Introducing automatic pipeline steps to detect security risks and maintain minimal latency.

Data Science Intern May 2020 - August 2020
Royal Bank of Canada

- Developed a proof of concept cost analytics React dashboard that identifies cost drivers in real time, empowering business leaders with actionable insights to proactively manage budgets.
- Reduced monthly expenditure forecast errors by 11.7% by utilizing time series analysis with ARIMA, XGBoost and Recurrent Neural Networks on real time data.
- Pitched the project to top level business executives and hundreds of RBC employees, attaining a position as the top internal solution out of 9 total teams at the final project exhibition.

Data Scientist Intern May 2019 - August 2019
University of Toronto Information Technology Services

- Piloted an automatic job description to salary band classification tool by optimizing language models on historical assessments, reducing evaluation time from the scale of weeks to days.
- Employed layer-wise relevance propagation to illustrate the influence of individual input words on the predicted likelihoods of salary bands, thereby providing hiring managers with actionable insights to adjust job descriptions and attain desired salary bands.

Research

Undergraduate Researcher October 2020 - February 2022

Robot Vision and Learning Lab, *University of Toronto*

- Worked with Professor Florian Shkurti on exploring approaches for overcoming the impractical but commonly utilized assumptions of given task boundaries and identities within the field of continual learning for life-long image classification, with funding from LG Electronics.
- Composed and presented literature reviews to become acquainted with novel areas and to derive applications and extensions to apply in our own work.
- Adapted an energy-based method using model uncertainty as measured by output logit entropy from out-of-distribution detection research to detect task boundaries in an online setting.
- Applied online smoothing filters such as Savitzky-Golay and Kalman filters to reduce erratic energy score fluctuations between batches and distinguish boundaries with greater precision.
- Experimented with energy-based models to perform task identity recognition while utilizing negative sampling and a core set of previous task exemplars to reduce catastrophic forgetting.
- Detailed reasoning behind specific approaches and presented biweekly experimental progress reports to the corporate sponsor.

Teaching Experience

Teaching Assistant January 2020 - April 2020,

CSC148: Introduction to Computer Science, *University of Toronto* January 2021 - April 2021

- Instructed and mentored 30+ undergraduate students each semester through practical lab activities in both in-person and online environments.
- Hosted office hours to assist students with assignment work and exam preparation.
- Assisted in grading student assignments and exams.

Skills

Languages Python, Java, SQL, JavaScript, C.

Frameworks PyTorch, Keras, React.

Tools Git, Unix, Bash, AWS, Android.