Yuchen Wang

Passionate software engineer and researcher, striving to solve challenging real-world problems.

LINKS

Email: yuchenw@stanford.edu
Page: https://yuchenwyc.com
Github:// yuchenWYC
LinkedIn:// yuchenWYC

EDUCATION

Stanford University
Sep 2021 - Mar 2023
Master of Science in Computer Science

University of Toronto
Sep 2017 - Jun 2021
Honours Bachelor of Science Computer Science & Statistics, minor in Mathematics
cGPA: 3.98/4, Course Avg.: A+

AWARDS

(Jan 21) *Konrad Group Women in Technology Scholarship* $2000
(Jan 21) *The Dorothy Walters Scholarship* $2000
(May 20) *UofToronto Excellence Award* $6,000
(Dec 19) *The Dorothy Walters Scholarship* $600
(All years) *Dean's List Scholar*

SKILLS

Specialized
Python • C • Unix/Linux • LaTeX • Git • JavaScript • ReactJS • HTML & CSS

Familiar
R • C++ • MatLab • SQL • Java (Android)

Machine Learning Libraries
NumPy • PyTorch • Pandas • Matplotlib • ggplot2 • SciPy • Scikit-learn • OpenCV2

WORK EXPERIENCE

Microsoft | Software Engineer - Bing
June 2023 - Present | Mountain View, CA
- Design and implement a logging system for large language model product pipelines that is reliable, easily readable and easy to query.
- Design and support features for Azure Semantic Search, engineer solid production workflows for new cases.
- Technologies: C#, Kusto

Microsoft | Applied and Data Scientist Intern - Bing
June 2022 - September 2022 | Mountain View, CA
- Generated different levels of negative data for language retrieval models using Approximate Nearest Neighbor on Euclidean distance of encoded query vectors.
- Designed new evaluation metrics that are universal for all natural languages (including URL overlap rate and modified BLEU/Rouge scores) to calculate relevance scores among search queries and docs.
- Developed a pipeline that effectively evaluates query-doc relevance scores using Transformer-based models.
- Technologies: Python, PyTorch, Pandas, SQL

Ernst & Young | Technical Consultant Intern (Software)
June 2021 - August 2021 | Shanghai, China
- Developed a software pipeline to help an aviation authority automate extracting parameter values from graphic interfaces, which takes real-time video stream as inputs, and outputs formatted data.
- Applied optical character recognition machine learning models (CNN-RNN and open-sourced software) and ran experiments on a dataset from the client.
- Communicated closely with clients, wrote detailed documentations and proposal for the project workflow.
- Technologies: Python, OpenCV2, Pandas, Docker

Vector Institute | Machine Learning Intern - Prof. Roger Grosse
April 2020 - January 2021 | Toronto, Ontario, Canada
- Designed and implemented hypernetwork algorithms (Self-Tuning Networks) to auto-tune hyperparameters of neural networks during a single run.
- Applied the algorithm on training Bayesian Neural Networks. The experimental results showed that the new architecture helps solving the difficult posterior collapse problem.
- Proven the related mathematical theories.
- Technologies: Python, NumPy, PyTorch, Autograd, Slurm

University Health Network | Machine Learning Intern - Prof. Bo Wang
May 2019 - December 2019 | Toronto, Ontario, Canada
- Worked with clinicians of Toronto General Hospital to design a data processing pipeline for electronic health records time-series.
- Engineered modular code for RNNs, Transformers and tree-based models.
- The final models accurately predict one-year and two-year outlook cause of death for post-organ-transplant patients with 0.7-0.8 auc-roc.
- Technologies: R, Pandas, Python, NumPy, PyTorch, Scikit-learn

PROJECTS

Project X Research Competition | September 2020 - November 2020
- Led the UofT team to develop a new neural ordinary differential equation architecture, which learns the dynamics of time series with multiple predictors and beats the baseline models in performance.
- Applied the model on semi-synthetic plant disease datasets and achieved remarkable results in both extrapolation and interpolation.
- Awarded a $20,000 prize as a winner. [ICML 2021 workshop]