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
Sept 2021 - Present
Master of Science in Computer Science

University of Toronto
Sept 2017 - June 2021
Honours Bachelor of Science
Computer Science & Statistics, minor in Mathematics
cGPA: 3.98/4.00, Course Average: 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 | 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 input and outputs formatted data.
- Utilized AI technologies(CNN-RNN and open-sourced software) for optical character recognition.
- Communicated closely with clients, wrote detailed documentations and proposal for the project workflow.
- Technologies: Python, OpenCV2, Pandas, Docker

Vector Institute | Machine Learning Intern
April 2020 - Jan 2021 | Supervisor: Roger Grosse
- Designed and implemented hypernetwork algorithms to auto-tune hyperparameters of neural networks during a single run.
- The empirical results showed that the algorithm helps solving the posterior collapse problem in Bayesian Neural Networks.
- Proven the related mathematical theories.
- Technologies: Python, NumPy, PyTorch, Autograd, Slurm

University Health Network | Machine Learning Intern
May 2019 - Dec 2019 | Supervisor: Bo Wang
- Worked with clinicians 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.
- Technologies: R, Pandas, Python, NumPy, PyTorch, Scikit-learn

PROJECTS

Smart and Secure Exchange | May 2022 - Present
Developed a web app that allows users to post needs for currency exchange, chat with others, and review transactions. Contributed to front-end and back-end development using the MERN stack.

Project X Research Competition | Sep 2020 - Nov 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]

ASA Datafest | June 2020
Led a student group to develop BERT models that classifies sentiment for COVID-19 related tweets, then performed data analysis and visualization.