XI HUANG

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EDUCATION

CARNEGIE MELLON UNIVERSITY

Master of Science – GPA 3.67/4.0 **Aug 2022 – Dec 2023**

- Software Engineering
- GRE General Test: Verbal – 160; Quantitative – 169; Analytical – 4

UNIVERSITY OF TORONTO

Bachelor of Science – GPA 3.81/4.0 (Upper years 3.97/4.0) **Sep 2016 – Jun 2021**

- Computer Science Specialist - Focus in Artificial Intelligence & Computer Vision
- Dean's List Scholar (2017, 2018, 2019, 2021, University of Toronto)

RESEARCH

RESEARCH ASSISTANT **Sep 2022 – present**

Carnegie Mellon University

- *Retail Object Recognition*, with Dr. Marios Savvides:
  - Collected and preprocessed image data to expand product detection model validation with unseen data
  - Trained different visual transformers to categorize retail objects for an automated checkout system for Walmart
- *Medical Image Analysis*, with Dr. Asim Smailagic:
  - Engineered an efficient solution that combines CNN and wavelet transformation for a diverse set of medical image analysis tasks while preserving patient privacy and accuracy

RESEARCH ASSISTANT **May 2020 – Apr 2022**

The Hospital for Sick Children, University of Toronto

- *Cardiac Arrest Prediction in the ICU*, with Dr. Anna Goldenberg:
  - Conducted software engineering and machine learning research for the testing and deployment of a cardiac arrest prediction ML model to decrease risks of life-threatening events in the ICU
  - Built data streaming pipeline using Microsoft Trill to perform data gathering and stream processing for both real-time data and offline data, and created bash scripts for performed testing and benchmarking
- *Medical Record De-identification*, with Dr. Alistair Johnson:
  - Explored novel NLP and data processing methods for efficiently de-identifying patient information in medical records to enable future medical research
  - Created python scripts that automates a series of research tasks such as environment setup, model training, and data analysis, connecting Google Colab with tools such as Google Sheets, Google Cloud Platform, and GitHub

PROJECTS

RESEARCH PROJECT LEADER **Jan 2023 – May 2023**

"Bug Severity Classification"

- Led a 5-member team in developing an automated bug severity classification solution that surpasses current industry standards using NLP on code snippets. Presented course project with favorable feedback from the teaching team

RESEARCH PROJECT MEMBER Jul 2021 – Dec 2021

"A Discriminative Transformer for Hate Speech Detection"

- Experimented with applying transformers with an innovative loss function in hate speech detection that outperforms existing solutions
- Co-wrote and published a paper at an international conference

INDUSTRY EXPERIENCES

CLOUD ENGINEER Nov 2021 – Jul 2022

State Street Corporation

- Investigated and standardized network firewall for company's cloud environment on AWS, currently in use by application teams for secure cloud computing
- Developed tools and infrastructure leveraging AWS resources including Lambda, CloudFormation to deploy, monitor, and manage production services and products in the cloud, in use by the operations team

SOFTWARE ENGINEER INTERN May 2019 – Apr 2020

State Street Corporation

- Designed and implemented a series of internal cloud-based environment-monitoring services using AWS resources, deployed as infrastructure-as-a-service (IaaS) to both external and internal clients
- Created a bash script to generate a report of every git branch in the team repository and associate their relevant Jira issues for team workflow management
- Created a bootstrapping framework in bash for simplified and standardized environment setup in EC2 virtual machines for daily use by the development team

PUBLICATIONS

- Tonekaboni, S, Morgenshtern, G, Assadi, A, Pokhrel, A, **Huang, X**, Jayarajan, A, Greer, R, Pekhimenko, G, McCradden, M, Chevalier, F, Mazwi, M, Goldenberg, A. (2022). *How to validate Machine Learning Models Prior to Deployment: Silent trial protocol for evaluation of real-time models at the ICU*. In: *Proceedings of Machine Learning Research* 174:169-182 Available from https://proceedings.mlr.press/v174/tonekaboni22a.html
- **Huang, X**, Xu, M. (2021). *An Inter and Intra Transformer for Hate Speech Detection*. In: *2021 3rd International Academic Exchange Conference on Science and Technology Innovation (IAECST)* 346-349 Available from https://ieeexplore.ieee.org/document/9695652

AWARDS

- Undergraduate Student Research Awards (USRA) (2020, NSERC)
- Innis College Alumni Association Scholarship (2019, University of Toronto)
- Canada Chinese Computer Association Scholarship In Computer Science (2018, University of Toronto)

SKILLS

- TEAMWORK: Communication, on-time delivery, remote work
- LANGUAGES**:** Python, JavaScript, Java, C, C#, SQL, Bash
- TECHNOLOGIES**:** AWS, PyTorch, Node.js, Express.js, Microsoft Trill, LaTeX