Hantang Li

individual.utoronto.ca/hantang_li
hantang.li@mail.utoronto.ca

EDUCATION

UNIVERSITY OF TORONTO
Master of Science in Applied Computing
Sep 2022 - May 2024 | Toronto, ON

UNIVERSITY OF TORONTO
Honours Bachelor of Science, Computer Science Specialist
Data Science Specialist
Sep 2017 - May 2022 | Toronto, ON
Cum. GPA: 3.90/4.00
Dean's List Scholar for all school years

COURSEWORK

Computer Networks (ongoing)
Storage Systems (ongoing)
Cloud-Based Data Analytics (ongoing)
Introduction to Image Understanding
Operating Systems
Computer Organization
Algorithm Design and Analysis
Software Design
Programming on the Web
Databases
Business Software
Uncertainty & Learning
Data Science I & II
Stochastic Processes
Reinforcement Learning
Neural Networks and Deep Learning,
Data Analysis I & II
Design and Analysis of Experiments
Principles of Programming Languages
Advanced Calculus
Linear Algebra I & II
Probability & Statistics I & II

LINKS

ProjectList:// **hantang_li**
Github:// **Hantang-Li**
LinkedIn:// **hantang-li**

SKILLS

PROGRAMMING
Python • R • Java • C
JavaScript • Git • Bash
Docker • SQL • LaTeX

LIBRARIES
NumPy • Pandas • PyTorch • Hadoop
Spark • Plotly • seaborn • ggplot2
OpenCV • FFmpeg • Robosuite

RESEARCH AND WORK EXPERIENCE

UNIVERSITY OF TORONTO | Teaching Assistant
Sep 2022 - Dec 2022 | Toronto, ON | Course Code: CSC207 Software Design

- Mentoring three student teams on designing and implementing the course project using Java. Leading weekly labs, and grading assignments.

SUNNYBROOK HEALTH SCIENCES CENTRE | Research Assistant
May 2021 - July 2022 | Toronto, ON | BrainLab | Supervisor: Maged Goubran

- Focus on using Generative Adversarial Networks and Convolutional Networks to translate Multiphase CT angiography to CT perfusion images.(Python, Pytorch, NiBabel, MONAI)
- Processed clinical 3D CT data for the UNETR Pytorch model training pipeline.
- Conducted literature review, preprocessed the data, and analyzed patient information.

HUAWEI NOAH'S ARK LAB |ML Software Engineer
May 2020 - May 2021 | Markham, ON | Work as PEY co-op student

- Focused on solving computer vision problems, building ML systems, and contributing to Video Content Tagging on Huawei Cloud. (Python, PyTorch, Pandas, NumPy, Django, JavaScript, Docker)
- Developed multiple data preprocessing pipelines to process raw data for model training and testing.
- Trained image and audio classification models for a classification system to classify different categories of contents.
- Improved data analysis and visualization for evaluating the model's test results.

PROJECTS

ANALYSIS OF NEWS BROADCAST VIDEO | Jan 2022 - May 2022
- Built shot detection algorithm by evaluating local variance of histogram difference, performed better on news clips than thresholding algorithm.
- Implemented two face association algorithms based on the cost of the face detection algorithm.

EXPLORATION OF MUSIC OBJECT DETECTION USING DETECTION TRANSFORMER | Jan 2021 - May 2021
- Used the Transformer-based model Detection Transformer (DETR) on music object detection and compared it with Faster R-CNN.
- DETR outperformed Faster R-CNN on cropped images when evaluated using averaged precision.
- Analyzed the structure of DETR and Faster R-CNN. And we hypothesized from two directions (encoder, decoder) on the reason for this result.

SIDEWALK LABS DATA VISUALIZATION | Jan 2020 - May 2020
- Provided data analysis and visualization tools to help customers who used numina sensors make decisions.
- Analyzed raw sensor data using Pandas and developed interactive plots using Plotly to display the path heat map of objects, and show the dwell time distribution of selected areas.
- Worked as the team leader, established team workflow, and integrated the work results into an overall website.