

Chirag Karia

trichiragkaria@gmail.com | linkedin.com/in/chirag-karia | github.com/kidkych | Canadian Citizen

EDUCATION

Master of Science in Computer Science

Graduated Dec 2023

Ontario Tech University

Oshawa, ON

- 4.06/4.3 Cumulative GPA
- Three Minute Thesis Finalist

Bachelor of Engineering in Software Engineering

Graduated Apr 2019

Ontario Tech University

Oshawa, ON

- 1st Place in Electrical & Software Engineering Capstone Competition
- Internet of Things specialization

EXPERIENCE

Teaching Assistant

Sep 2019 – Dec 2022

Ontario Tech University

Oshawa, ON

- Head teaching assistant for Computer Vision; other courses taught include Scientific Data Analysis, Mobile Devices, Web Application Development, Software Design & Analysis, and Computer Architecture.
- Collaborated with the Computer Vision professor by refining course materials to enhance student engagement and entrusted by the professor with the task of delivering lectures in their absence due to strong subject knowledge.
- Repeatedly garnered positive feedback from students on ability to present complex concepts in a succinct manner as exemplified by an end-of-term rating of 4.7/5 and a nomination for the Excellence in Teaching Assistance award.

Data Scientist

Jul 2020 – Dec 2020

Mikkila AI

Toronto, ON

- Spearheaded development of a preliminary ETL pipeline to aggregate and standardize the highly unstructured COT report from the CFTC. Utilized Requests for retrieval, Pandas for data formatting, and PostgreSQL for storage.
- Assembled a report for leadership outlining reinforcement learning approaches for portfolio management to optimize investment decisions, ultimately providing actionable insights to inform directions of research.
- Collaborated with the technical lead and DevOps team to plan the distributed architecture for company's software system, ensuring scalability, reliability, and performance while optimizing technology selections.

Machine Learning Developer

Apr 2017 – Mar 2019

Investabit (now InvestDEFY)

Whitby, ON

- Reproduced published ML research relevant to finance & portfolio management; successfully built a reinforcement learning agent using tensorflow and RLlib that executes trades based on live data and market predictions.
- Reduced developer hours dedicated to ML model development by 20% through the creation of a Pandas based data pipeline that gathers data from disparate sources and unifies feature engineering for all teams.
- Created a service to automatically distill metrics quantifying market performance and model effectiveness into various charts using Plotly and Matplotlib to effectively communicate findings to teams leads and management.

PROJECTS

M.Sc. Thesis: Predicting 3D Human Motion from Video | *PyTorch, SMPL, OpenCV, NumPy, PyRender*

- Developed an SMPL based model that can predict the shape, pose, and location of multiple people in future unseen frames based on input video data.
- Model leverages a GPT style transformer architecture with a custom attention layer that is augmented with a human pose specific inductive bias and identity based query/key projections to better contextualize multiple people simultaneously.

TECHNICAL SKILLS

Languages: Python, C++, C#, JavaScript, Java, Bash

Frameworks: Vue.js, Flask, Django

Libraries: PyTorch, MMDetection, WandB, Tensorflow, Keras, OpenCV, Pandas, NumPy, PyRender, Matplotlib

Developer Tools: SQL, Mongo.DB, Git, Docker, AWS