

Austing Dong

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EDUCATION

Bachelor of Computer Science, University of Waterloo, GPA: 3.7

Sep 2022 - Present

- **Statistics & Actuarial Science Competition Prize**
- **University of Waterloo President's Scholarship of Distinction**
- **Faculty of Math Entrance Scholarship – The highest for international students(25,000CAD)**
- **Core courses:** CS246: C++, CS240: Data Structure & Data Mgmt, CS241: Found of Sequential Programs, CS341: Algorithms, CS370: Numerical Computation, CO367: Nonlinear Optimization, STAT231: Statistics

SKILLS

Programming & Frameworks Python, C, C++, Java, R, SQL, HTML, CSS, JavaScript, Spring Boot, vue, selenium, Django, flask
ML & DS related XGBoost, scikit-learn, TensorFlow, PyTorch, NumPy, Pandas, OpenCV, Matplotlib
Technical Skills & tools Git, Wireguard, docker, redis, kali, nginx, VMWare

ACHIEVEMENTS

Certificate: IBM - IBM Data Science Professional Certificate 📄

Oct 2023

Certificate: Machine Learning Specilization (DeepLearning.AI) 📄

Apr 2023

Euclid Math Contest Top 1%

Apr 2022

USA Computing Olympic Gold Award Passed with Full Marks (Competed using C++)

Dec 2021

EXPERIENCE

Data Analyst Intern, Microsoft, Hong Kong

Remote in Hong Kong | Jan 2024 - Apr 2024

- Participated in several tasks with full data analysis methodology, including data collection, EDA, Data visualization, Modeling.
- Built classification models for **anormal detection** in Windows Defender and Azure hard disk error messages.
- Compared model performances, applied hyper-tuning via GridSearch. Applied bagging for weak classifiers to enhance performance.
- **Cooperated with collaborators well**, built **data pipeline** for direct transformation of the raw data from data collector.

Software Developer Intern, YSAIT

Remote in Canada | Sep 2023 - Dec 2023

- Experienced with ChatGPT API usage and prompt engineering. Developed and implemented a web-based course server backend using **Flask** and made use of **ChatGPT 3.5 API**, enhancing the company's online education abilities.
- Successfully deployed the service on **AWS EC2** using **Docker**, ensuring scalable and reliable access for users.
- Collaborated closely with the IT team to integrate the server with existing company infrastructure, demonstrating **strong team-work and technical skills**.
- Worked as a role of **back-end developer**, developing a backstage management system with **web-based-UI** and backend services by **Java + Spring Boot + Maven**, with **mybatis + mysql** as database and **redis** as a cache to store clients' login session.
- **Good team player**, also joined in some small projects for the discussion and idea / knowledge sharing

Machine Learning Developer, UWAFI CAV

University of Waterloo | May 2023 - Present

- Currently developing car tracking system by using **MOT Algorithm** with **3D Kalman filter**.
- Using **R-CNN** for cars detection, building track system based on the detection results. Using **IoU** to measure similarity.
- Built models in **Docker** containers, supporting a driving simulator built on **Ubuntu 20.04 + Ros Foxy System**.

RESEARCHES & COMPETITIONS

Stroke Detection by Image Segmentation with Residual U-Net 📄

Apr 2024

- Led a research team focusing on **stroke MRI images segmentation** with the comparison of **U-Net and Residual U-Net**.
- Built data pipeline via **tensorflow Dataset**. Applied data preprocessing for .nii.gz files by **nibabel and nilearn**, and data augmentation. Generated essay and slides from the result of lab. Assigned the tasks of labs, essays and slides to teammates properly.
- Applied several evaluation metrics both in training and testing, including auc, dice coefficient and IoU. Used **Tensorboard** callbacks for visualization and real-time monitoring. Proved the advantage of Residual blocks in U-Net.
- Appended **Attention U-Net** for further researching. Using **Domain Adaptation** from this source dataset to a new dataset of hemorrhagic CT. The outcome of essay names **Enhancing Image Segmentation for ICH through Transfer Learning from Stroke MRI to ICH CT** has accepted by ICIAAI conference (CPCI index) and under the process of publish.

Scotiabank Data Science Discovery Days Competition 📄

University of Waterloo & Scotiabank | Jan 2023

- Won **1st place** as a team of 5 among 500+ participants
- Created a model to **predict credit card fraud** that reduces cost and increases customer satisfaction for Scotiabank
- Pre-processed data: handled **data imbalance** by applying data augmentation with **SMOTE** resampling
- Trained the model with **XGBoost** and applied **thresholding** for F1 Score optimization.

NASA International Space Apps Challenge Hackathon 📄

Online | Oct 2022

- Received the award of **Global Nomination**: only **10% out of 4500** teams are nominated
- Created an **Unsupervised NLP ML** model by using **Complex Network** to analyze each words' **Centrality**.
- Trained a **Supervised NLP Model** using **Python, TensorFlow, and Web Scrapping** tools that simplify scientific research.