

Darshil Shah

4A Engineering | ✉ dr5shah@uwaterloo.ca | ☎ 647.707.3156 | 🌐 Github: DarshilShah-12 | 🌐 darsh.dev

SKILLS

PROGRAMMING LANGUAGES: Python • Java • C++ • C# • Ruby • JavaScript

HARDWARE EXPERIENCE: Arduino • FPGA • Circuit Design • Soldering

EXPERIENCE

HUAWEI | AI DEVELOPER

Jan 2021 – Apr 2021 | Waterloo, ON

- Researched, implemented and fine-tuned multiple deep learning models for **data anonymization** purposes
- Applied **transfer learning** to train a license plate detection model that achieved an **mAP of 80%**
- Developed, tested and documented a console interface to demo ML models to customers in Java

GEMINARE | MACHINE LEARNING ENGINEER

May 2020 – Aug 2020 | Toronto, ON

- **Proposed and implemented high-level architectural changes** that led to successful tag generation for real-estate images
- Trained an object detection model to achieve an mAP and recall above 85%, and fine-tuned project-critical CNNs to obtain an **average accuracy of above 90%**
- Multithreaded and optimized model integration scripts to **reduce end-to-end runtime by over 68%**
- Developed and integrated tools for image quality assessment and image restoration using stacked autoencoders to filter and fix images with undesirable properties (Ex. Gaussian noise)

TERADICI | SOFTWARE DEVELOPER (CLOUD-ACCESS)

Sept 2019 – Dec 2019 | Vancouver, BC

- Improved utility software written in C++ to determine host-side capabilities to handle smart-card SSO
- Developed unit-tested firmware in C to automate connection to virtual machines with smart-cards

OCULYS HEALTH INFORMATICS | SOFTWARE DEVELOPER

Jan 2019 – Apr 2019 | Waterloo, ON

- Developed back-end services for analytics dashboards used in hospitals with C# in the ASP.NET MVC framework
- Enhanced user interfaces by employing efficient web-development practices with JavaScript and jQuery

FINE COTTON FACTORY | JR. SOFTWARE DEVELOPER

Apr 2018 – Aug 2018 | Toronto, ON

- Developed a web application that tracked metrics such as machine efficiency and material usage per job with Ruby on Rails
- Acquired experience deploying with Docker

PROJECTS

YOUTUBE WRAPPED 🎥 | VIDEO AUTOMATION

Dec 2020 – Jan 2021

- Created an application that automatically develops a personalized video summary of a user's experience on YouTube

AR SUDOKU SOLVER 🎮 | AUGMENTED REALITY, COMPUTER VISION

Aug 2020 – Sept 2020

- Developed an application that solves Sudoku puzzles and augments missing digits back onto the board in real-time
- Applied image processing techniques using OpenCV to **increase digit localization and recognition accuracy to 97%**

NUMERICAL DIGIT OCR 🎮 | NEURAL NETWORK

Mar 2019 – May 2019

- Created an artificial neural net in Python to classify handwritten digits; model achieved a **classification accuracy over 95%**

EDUCATION

UNIVERSITY OF WATERLOO

CANDIDATE FOR BACHELOR OF APPLIED SCIENCE, HONOURS BIOMEDICAL ENGINEERING (CO-OP)

2017 – 2022

- Relevant Coursework: Algorithms, Pattern Recognition, Linear Algebra, Statistics, Digital Systems, Circuits
- Specialization: **Artificial Intelligence**

INTERESTS

Competitive Programming • Machine Learning • Drones • Chess • Ping-Pong