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

AI DEVELOPER | HUAWEI   Jan 2021 – Apr 2021 | Waterloo, ON
- Researching, implementing and fine-tuning SOTA deep learning models for data anonymization purposes

MACHINE LEARNING ENGINEER | GEMINARE   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)

SOFTWARE DEVELOPER (CLOUD-ACCESS) | TERADICI   Sept 2019 – Dec 2019 | Vancouver, BC
- Developed unit-tested firmware in C to automate connection to virtual machines with smart-cards and simultaneously gained experience using tools such as CMake and Google Test
- Improved utility software written in C++ to determine host-side capabilities to handle smart-card single sign-on (SSO)
- Stabilized USB data transferring to enable remote printing to client-side devices

SOFTWARE DEVELOPER | OCULYS HEALTH INFORMATICS   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

JR. SOFTWARE DEVELOPER | FINE COTTON FACTORY   Apr 2018 – Aug 2018 | Toronto, ON
- Developed a system 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, Digital Systems, Circuits, Linear Algebra, Statistics
- Specialization: **Artificial Intelligence**

INTERESTS

Competitive Programming • Film-Making • Drones • Chess • Ping-Pong