

Kunal Chandan

Computer Engineering Candidate

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LANGUAGES

- Java
 - OpenGL
- C/C++
 - Allegro5
- Python
 - TensorFlow
 - PyTorch
 - NLPTK
 - OpenCV
 - Pandas
 - Numpy
 - Selenium
 - Matplotlib
- Shell
- Octave/MATLAB
 - PsychToolbox
- SQL
- LaTeX & XeLaTeX
 - Tikz

SKILLS

- Linux
- Data Processing
- Webscraping
- Git
- Altium
- Jira

CLUBS

Engineering Society Rep.
Engineering Ambassador
Waterloop Electrical Member

EDUCATION

**UNIVERSITY OF
WATERLOO**
B.ASC COMPUTER
ENGINEERING CANDIDATE

SUMMARY OF QUALIFICATIONS

- **Data engineering** experience from prior internships at OICR & York U
- **Machine Learning** personal projects with **Tensorflow**, **NLPTK**, and **PyTorch**
- 5 years of programming experience in **Java**, **Python**, **C++** & **MATLAB**
- 2 years of experience with **Linux** distributions & **Shell**

EXPERIENCE

BIOINFORMATICIAN | ONTARIO INSTITUTE FOR CANCER RESEARCH

Jan 2019 - April 2019 | Toronto, ON

- Designed genomics pipelines for **data visualization**, **data cleaning** & **analysis** interfacing with existing **R**, **Perl** and **Shell** pipelines
- Project lead of new **statistical analysis** tool for all future studies at OICR
- Wrote future-proof & extensible code for processing **big datasets** (**Pandas** & **Shell**)
- Project open-sourced & version controlled with **Git**; created extensive **documentation**

RESEARCH INTERN | ELDER LAB, YORK UNIVERSITY

June 2017 - June 2018 | Toronto, ON

- Analysis of human response to visual stimulus with **MATLAB** & **PsychToolbox** with 2 novel experiments; research conducted under guidance of **Post-Doc**
- Designed data collection methods using **Amazon M Turk** guided by **PhD** candidates
- Conducted data augmentation, **visualization**, interpretation using **Python**, **OpenCV**, **Matplotlib** for experimental data

ENGINEERING LEAD | FIRST TEAM 6632, SUPREME ROBOTICS

Sept. 2017 - June 2018 | Toronto, ON

- Designed and programmed **autonomous** robot control systems in **Java** to deliver game pieces around field using **encoders** and **gyroscopes**
- Lead team of **30+** members over 12 weeks designing a 120 lbs robot

PROJECTS

MACHINE LEARNING PROJECTS

Natural Language classification of legal documents using **NLPTK** & **Tensorflow**

- Data cleaning and pre-processing using **Pandas** & **Numpy**

Global cloud coverage sequential data prediction with **PyTorch** (current)

- Image cleaning and pre-processing of **16.4 Gb** of data with **OpenCV**
- Pooling, **LSTMs**, and **RNNs** used to do image prediction

GITHUB.COM/KUNALCHANDAN

Personal programming projects, highlights include:

- **Rendering Engine** from scratch using **OpenGL Java bindings** (LWJGL)
- **Physics Engine** (Kinematics & Electrodynamics) written with **Allegro5** & **C++**
- WaterlooWorks and OscarPlus (McMaster) job **crawler**
- **Webcrawlers** for scraping comics from KissComics

AWARDS

- 2019 B.P. Dammizio Scholarship
- 2018 Co-op Award for Outstanding Achievement
- 2018 University of Toronto National Biology Competition 78th in Canada