S. Alex Yun

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EDUCATION

UNIVERSITY OF WATERLOO
MMath in Computer Science (Thesis)
Jan 2018 – Aug 2020

UNIVERSITY OF TORONTO
HBSc in Psychology & Human Biology
Sep 2010 – Apr 2015

SKILLS

PROGRAMMING
Python • Numpy • SciPy • pandas
scikit-learn • Matplotlib/Seaborn
PyTorch • TensorFlow • Flask
SQLAlchemy • PostgreSQL
R • MATLAB • Git • Linux

Familiar: C++ • OpenCV
JavaScript • React • D3.js

MACHINE/DEEP LEARNING
Support Vector Machine • regressions
k-nearest neighbours • decision trees
k-means • Principal Component Analysis
Convolutional Neural Networks
Recurrent Neural Networks

LANGUAGES
English • Korean

COURSEWORK

GRADUATE
Introduction to Artificial Intelligence
Software Engineering for Big Data
Synergy between CS and Biology
Simulating Neurobiological Systems

UNDERGRADUATE
Algorithms
Data Structures and Data Management

CERTIFICATE

Machine Learning (Coursera, 2020)

RESEARCH

COMPUTATIONAL HUMAN INTELLIGENCE LAB | Graduate Researcher
Jan 2018 – Aug 2020 | Waterloo,ON

- **Data analysis:** utilized dimensionality reduction and clustering algorithms (e.g., Gaussian mixture models, MPPCA) to group personality data and conducted hypothesis testing, using nonparametric tests.
- **Data mining:** crawled thousands of online collaborative projects and extracted user profiles and comments, using *REST API*, *Beautiful Soup*, and *Scrapy*
- **Natural Language Processing (NLP):** inferred personality traits and analyzed sentiments of tens of thousands of developers from their digital footprints, using *Gensim* and *NLTK*
- **Graphical models:** examined the network topologies of hundreds of GitHub repositories to differentiate between successful vs. unsuccessful projects, using *NetworkX* and *graph-tool*

EXPERIENCE

UNIVERSITY OF WATERLOO | Instructional Apprentice
Sep 2018 – Dec 2018; Sep 2019 – Apr 2020 | Waterloo, ON

- CS 116: Led tutorials and taught a group of undergraduates in the fundamentals of computer science and programming concepts in *Python*

UNIVERSITY OF WATERLOO | Teaching Assistant
Jan 2018 – Aug 2018; Jan 2019 – Aug 2019 | Waterloo, ON

- Introduction to Computer Science 2 (CS 116)
- Data Types and Structures (CS 234)

PROJECT

AUTOMATIC GROUP-LEVEL EMOTION RECOGNITION (Coursework)

- **Computer Vision (CV):** used a residual neural network (ResNet) to extract facial and skeletal features from group-level photos, and classified emotions into positive, negative, and neutral categories.

AWARD

2020 ACM SIGSOFT Distinguished Artifact Award (ICSE2020)

PUBLICATION

[1] R. N. Iyer, **S. A. Yun**, M. Nagappan, and J. Hoey. Effects of personality traits on pull request acceptance. *IEEE Transactions on Software Engineering*, 2019 (**leading software engineering journal; impact factor: 4.778**).