KEVIN LU

GET IN TOUCH

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SKILLS

- Frontend: HTML/JS/CSS, React/JSS
- Backend: PHP, Flask, PostgreSQL, MongoDB, Heroku
- Data Science: Jupyter, SQL, Numpy/Pandas/SKLearn, Keras/TF
- Other languages: C++, Python, Bash, Excel, Latex, Mathematica

EDUCATION

University of Waterloo

Bachelors of Computer Sciences (Co-op), 2021-present

Sir Winston Churchill Secondary

International Baccalaureate Diploma Program, 2019-2021

- IB Predicted Score of 40/45
- Instructor of Advanced Group in code club, head coach of Math Challengers team, executive for numerous other clubs

AWARDS

- Faculty of Mathematics Entrance Scholarship $10,000 (2021)
- President's Scholarship of Distinction $2,000 (2021)
- R.A. Pyke Scholarship for Mathematic recipient: $500 (2021)
- LGen Quinn Award Runner Up for Musical Excellence: $125 (2021)

ACHIVEMENTS

- Qualifier of Canadian Math Olympiad (2020) (top ~50 in Canada)
- 3 time qualifier of American Invitational Math Examination (top 5% of test-takers) (2019-2021)
- 3 time top in school for Canadian Computing Competition (2019-2021)
- USA Computing Olympiad Gold Qualifier (2020)

WORK HISTORY

Tutor

Math4Me, Feb 2018 - Jun 2018

- Tutored struggling students for Math, Sciences and English
- Tutored 4 students at a time for 4 hours a week

Web Developer and Media Assistant

Chinese Christian Ministry Canada, 2019-2020 Summers

- Developed Wordpress website using HTML/JS/CSS/PHP (https://communitycare.ccmcanada.org/)
  - Maintained website throughout school year
- Created stop-motion movie as cover image to advertise their first aid kit

Technical Reviewer for "Mastering spaCy'

Packt, Jan 2021 - Apr 2021

- Reviewed for Packt's book introducing the NLP Python package spaCy

CODING PROJECTS

PyATE Python package for ATE, 2020-present

- Implemented five automated term extraction (ATE) algorithms based on research through eight papers using spaCy POS tagging
- Engaged in significant independent research from sources such as
- Published implementations as a Python package on pip, attaining 25,000 downloads
- Also trained a spaCy model to identify terms to 95% accuracy in the ACL database using Kaggle's free GPU instances and the tool Sacred, hosting experiments on a free MongoDB database
- Demo at https://pyate-demo.herokuapp.com/ using React/Flask

Recycler: CV for classifying recyclables, 2020

- Fine-tuned Google's XCeption CNN on the Trashnet database, using Keras up to 87% accuracy, using Kaggle's free GPU instances
- Demo using Flask backend at https://recycler-cv.herokuapp.com/

Touchscreen using Wii Remote and IR Pen, 2020

- Built a Kivy app to turn any screen into a touchscreen using a Wii Remote and infrared pen for an inexpensive touchscreen
- Based on Johnny Chung's project, which used an outdated version of Java, I recreated it in Python using the open-sourced package cwiid

Research Mode: Chrome Extension for Research Assistance, 2020-present

- Adds a convenient sidebar for easy access to notes while conducting research, including reading, writing, and deleting notes, which are synced to a PostgreSQL database
- Simplifies current page and highlights and defines technical terms
- Several NLP features planned such as text simplification, auto-generated citations, summarizations and semantic search
- Uses React for frontend, with a Flask backend, which runs on Heroku

Machine Learning for Predicting Rent prices, 2021-Present

- Scraped data from Kijiji using BeautifulSoup4
- Visualized data using Pandas and Matplotlib on Jupyter notebooks
- Achieved 90% mean accuracy in predicting rent prices in Regina using random forest regression, used in calculating profitability of real estate on Realtor

INTERESTS

Playing jazz on trumpet, badminton, cosmology,