Lorena Buciu

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Education

University of Toronto Toronto, ON
Honours Bachelor of Science in Computer Science *September 2020 – April 2025*

- **Relevant Coursework**: Software Design, Computer Organization, Algorithms & Data Structures, Statistics for Data Science, Systems Programming

Technical Skills

Languages: Java, Python, JavaScript, HTML/CSS, R
Tools/Technologies: React, Node.js, Flask, MongoDB, Express.js, Pandas, NumPy, Plotly, PyTest, LaTeX
Developer Tools: GitHub, Git, JetBrains

Experience

Software Developer May 2021 – August 2021
University of Toronto *Toronto, ON*

- Assisted in the development of PythonTA, a Python package used by thousands of UofT students in introductory computer science courses to help find and fix common coding errors
- Resolved issues with previously implemented custom error checkers and developed a test suite
- Implemented the custom missing-space-in-doctest checker using astroid and pylint's capabilities
- Re-designed the PythonTA error report page by making HTML/CSS changes to enhance the user experience

Link Crew Leader August 2019 – June 2020
Garth Webb Secondary School *Oakville, ON*

- Organized activities for grade 9 orientation
- Served as a mentor to multiple grade 9 students, ensuring a seamless transition into high school
- Responsible for being a group leader to 15 students

Projects

UofT Course Scheduling Application | *Java, JUnit* September 2021

- Adhered to SOLID principles and clean architecture
- Utilized various design patterns such as Strategy and Facade
- Designed interactive CLI output for course information retrieved from the UofT course API
- Developed JUnit test suites to achieve 70% code coverage

Reddit Topic Analysis | *PRAW (Reddit API Wrapper), Python, Flask, HTML/CSS* February 2021

- Developed a sentiment analysis script using the NLTK VADER Lexicon library and PRAW to determine the sentiment of a Reddit topic
- Implemented a Flask API to send the processed data from the script to the client side
- Integrated the front-end with the back-end using Flask integration capabilities

Vancouver Sea Level Rise Model | *Python, Pandas, Plotly, Dash* November 2020

- Implemented data cleaning and computing functions
- Processed Vancouver DSM data from a into coordinate points and computed sea level rise relative to elevation
- Implemented the SARIMAX regression model to predict sea level rise overtime
- Created an interactive map with Plotly to display which areas in the Vancouver region are most susceptible to flooding given a year
- Used the Dash framework to display the visualizations as a web app

PicLinx | *MERN Stack, HTML/CSS, JavaScript* June 2020

- Developed a full-stack image sharing web application using the MERN stack
- Implemented a REST API using Node.js and Express.js to perform CRUD operations and user authentication routes
- Set up a MongoDB database to store bcrypt encrypted user information