917 Lemonwood Crescent
Windsor, Ontario, N9G 2R6

October 13th, 2016

Dear Sir or Madam:

I am applying for the Waterloo Science Computing Department's Django Developer position. Currently, I am a second year student majoring in Physics and Astronomy. With relevant programming experience, I believe that I would be an excellent candidate for this position.

My experience includes working in the Nanophotonics and Quantum Control Lab at the University of Windsor as a Research Assistant under the supervision of Dr. Chitra Rangan. During my time in the lab, I implemented various planetary simulations using C in a Linux environment. Moreover, I employed numerical methods including 4th order Runge-Kutta to integrate differential equations and Python to plot and analyze trends in orbits. Through these projects, I have gained experience in Python and C, and I have learned some software development practices, such as writing code that is readable, maintainable, and intuitive. Furthermore, working in a lab on a regular basis matured my understanding of the fundamentals of physics, improved my data analysis skills, and helped me develop strong work ethic, curiosity, and communication skills.

Apart from my work experience, my courses as an undergraduate student are relevant to this position. I have taken two introductory algorithm courses where we covered topics like computer system overview of hardware and software, data types, algorithmic structure, sequential logic and modular programming. This course heightened my interest in computer science and has driven me to seek employment at UWSC. My combination of practical and academic experience in multiple programming languages makes me a perfect fit for this position.

Given my ability and eagerness to pick up new skills quickly, I would excel in this Django developer opportunity. My developing skills in python will improve the scalability of your project in order to save time refactoring in the future.

I am the right fit for this positions and I will bring all I have to offer to the table to optimize development time and be a key contributor to this project. I would like to set up a meeting with you to discuss how my qualifications will be beneficial to the success of your project. Thank you for your time.

Sincerely,

Samira Bulle
2A Physics and Astronomy

Samira Bulle

917 Lemonwood Cres., Windsor, ON | (519) 987-3235 | samira.bulle@uwaterloo.ca

Summary of Skills

- Experienced in: Python, C, LaTeX, Microsoft Excel
- Worked with numerical libraries in Python (NumPy, SciPy)
- Proficient in numerical methods used for solving differential equations
- Familiar with experimental equipment such as: oscilloscope, spectrometer
- Quickly able to employ skill set in different environments

Work Experience

Research Assistant May 2016 - August 2016
University of Windsor

- Worked in the Nanophotonics and Quantum Control Lab
- Developed a dynamic orbital simulation in C using numerical methods
- Generated plots of various orbits using matplotlib and SciPy
- Analysed data sets and compared trends to quantum mechanical models of orbits
- Documented algorithm developments to share with future users and developers

Private Tutor Sept 2014 - June 2015
Windsor, ON

- Taught Algebra, Calculus and Physics to students in grades 9-11
- Developed deeper understanding of material and patience with students

Education

Candidate for Bachelor of Science in Physics **and** Astronomy Sept 2015 - Current
University of Waterloo
Coursework: Intro to Algorithms, Waves, Electricity and Magnetism, Modern Physics

Independent Coursework

Galaxies and Cosmology In Progress
California Institute of Technology - Coursera
Topics: Modern extragalactic astronomy and cosmology, the physical universe, big bang, formation and evolution of galaxies, quasars, and large-scale structure

Awards and Certificates

University of Waterloo President's Scholarship Sept 2015
Diplôme d'études en langue française niveau B1 (81/100) Sept 2015
FIRST Robotics Regional Champions, World Qualifiers April 2015

Interests and Activities

- Physics Undergraduate Club, FemPhys
- Dark matter, Computer Science, Differential Equations
- Superbowl parties, euchre, yoga