Parman Chaddha

University of Waterloo: Nanotechnology Engineering, Minor Psychology
pchaddha@edu.uwaterloo.ca

Skills

- Data Analysis: Proficient in Python, SQL, MATLAB, Microsoft Excel (V.B.A., Macros)
- Frontend and Backend Development: React, JavaScript, CSS, HTML, Django, Node
- Proficient with standard laboratory equipment: Oscilloscope, FTIR, Raman Spec, Arbin, TGA, DSC, AFM, ESEM, TEM, Ellipsometry, X-Ray Diffraction, UV-VIS Spectroscopy.
- Communication: Microsoft PowerPoint, Tableau and technical reports.

Experience

Cell Engineering Intern *Tesla Inc., Palo Alto, California, United States* Jan. 2020-Aug. 2020

- Worked as part of the Cell Engineering Team to model cell profiles, analyze test results, and develop web tools to increase data accessibility throughout the company.
- Analyzed cell data and modelled battery discharge profiles using Python.
- Decreased analysis script run-times by a factor of 10-100 by implementing various optimization techniques such as parallelized computations, multi-threading, and decreasing overall computation order.
- Developed website tools using React, Django, and Node to transition from Java-based GUIs in an effort to reduce update toil and decrease response time required to fix issues.

Optical Development Co-op Student *Lumentum LLC, Ottawa, ON* Sept. 2018-Apr. 2019

- Worked as part of the Analytics and Algorithms Team to monitor and analyze research and production data of Wavelength Selective Switches (WSS) using liquid crystal on silicon (LCOS) technology.
- Analyzed millions of lines of production data using Python and Excel to remove noise, find trends, and fit data to physics-based profiles, in order to monitor and enhance WSS and LCOS performance.
- Calibrated and tested WSS device performance under various temperature and calibration conditions.
- Delivered presentations to team-members, managers, and executives, tailoring presentations as needed.

Canada Excellence Research Chair Student *Sulvaris Inc., Calgary, AB* Jan. 2018-Apr. 2018

- Performed extensive materials research to optimize fertilizer performance and meet client specifications.
- Tested all viable materials using ISO-standardized testing to ensure result accuracy and integrity.
- Analyzed results using Microsoft Excel, MATLAB, and Origin through application of theoretical fitting models, and regression techniques to ensure maximized optimization in multiple product parameters.

Education

Candidate for B.A.Sc. in Nanotechnology Engineering with Minor in Psychology,
University of Waterloo, Waterloo, ON. Cum. GPA: 3.9 Sept. 2016- Apr. 2021

Projects

Citadel Datathon, *University of Waterloo, Waterloo, ON* May. 2018-May. 2018
Optics Research Student, *University of Winnipeg, Winnipeg, MB* May. 2016-Aug. 2016
Engineering Team Lead, *NorthWind Robotics, Winnipeg, MB* July. 2015- Jan. 2016

About Me

Along with being a back-country camping and outdoors enthusiast, I enjoy writing poetry, and playing the guitar. As a coffee connoisseur, one of my favourite things is sipping joe at a local café, while reading anything from Robert Beck to Iain M. Banks.