Mengda (Albert) Yu

Data Scientist | Electrical Engineer

WORK EXPERIENCE

Cadex Electronics Inc. | Research & Verification Engineer Coop (2017)

- Developed a matrix weights optimization program using Python and genetic algorithm to improve vehicle battery's health estimation
- Applied statistical machine learning algorithms using Scikit-Learn to improve battery health prediction
- Implemented machine learning model into C firmware and debugged via CodeWarrior
- Automated testing jig development or implementation by LabVIEW
- Assisted with a comprehensive final report that detailed each stage of the testing, discrepancies, and underlying theory and justification for the project design

ZE Power Inc. | Service Quality & Data Analyst Coop (2016)

- Performed appropriate data validation, including database, log, processor and system monitoring
- Assisted in mining data from the SQL database that was used in several significant presentations
- Diagnosed data issues and created daily reports in Excel

TECHINICAL PROJECTS

TRIUMF Particle Detection Classification (2019)

- Implemented machine learning model in Python to improve subatomic particles identification to less than one in a million cases of misclassification
- Experimented on neural network techniques (e.g. CNN) to improve subatomic particles identification

Shiny Web App | bit.ly/2GLXV8K (2019)

- Built an interactive visualization web app using Shiny to explore a dataset
- Analyzed and processed the complex dataset using R

Tree Canopy Bust Shelter Data Logger | bit.ly/2GJqVhA (2018)

- Designed, built, programmed, and tested a data logger that measures air & soil temperature, shelter water flow rate, and wind direction & speed.
- Drafted a finite state machine using C/C++ in Arduino which allowed for easy implementation of application behavior
- Transmitted data over 3G network and stored data in a cloud database (ThingSpeak.com) for visualization
- Awarded first place in UBC ELEC Capstone Video Competition

EDUCATION

Master of Data Science (2018 – present)
University of British Columbia, Vancouver, BC

Bachelor of Applied Science - Electrical Engineering (2013 – 2018)
University of British Columbia, Vancouver, BC

SKILLS

Languages: Python, R, C/C++, SQL, LaTex, HTML, CSS
Software: Git, Jupyter Notebook, Microsoft Office Suite, Docker, MATLAB
Domains: Machine learning/Deep learning, Feature engineering & Model selection, Data wrangling & visualization
Statistics: Regression, Hypothesis testing, Time series analysis, Bayesian inference, A/B testing

HONORS & AWARDS

Applied Science International Scholarship
UBC, 2014, 2017
Trek Excellence Scholarship
UBC, 2017
Dean's Honor List
UBC, 2013 - 2018

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