MILIND PALIATH-PATHIYAL

1821 Redwood Creek, San Jose, California | m: 669.268.8813 | mpaliath@uwaterloo.ca
U.S. Permanent Resident | https://milindpathiyal.github.io/ | https://github.com/MilindPathiyal/

TECHNICAL SKILLS

- **Programming Languages | +5 Years** | Python, SQL, C++, Java, Swift
- **Big Data & ML Frameworks | +3 Years** | Tensorflow, Keras, Spark, Scikit-Learn, Pandas, NumPy, Hadoop
- **Data Pipeline & Version Control Services | +3 Years** | GitHub, Docker, GCP, Azure DevOps
- **Data Visualization Tools | +2 Years** | Matplotlib, Plotly, Grafana, InfluxDB

EDUCATION

University of Waterloo   Expected Graduation June 2022
Honors B.A.Sc. in Systems Engineering (Co-op Program)
Relative Coursework: Introduction to Deep Learning, Autonomous Mobile-Robots; Machine Intelligence; Pattern Recognition

WORK EXPERIENCE

Machine Learning Engineer Intern   (8 mth full-time & 6 mth part-time during school) Sep 2020 – Present
Geminare Inc., Toronto, Ontario
- Developed 4 image classification and segmentation models with 80-87% accuracy and delivered to customer product
- Optimized 3 complex models with dimensional reduction to achieve 87-95% accuracy
- Utilized Python to develop a malware detection model to identify malicious malware with 86% accuracy
- Created 4 time-series anomaly detection models doubling performance of latest cybersecurity product
- Presented detailed reports of results, value propositions, and strategy to ML team and CEO every week

Computer Vision Engineer Intern   (4 mth) Jan 2020 – Apr 2020
Cisco Systems Inc, San Jose, California
- Worked on indoor localization using Wi-Fi signals produced from wireless access points
- Improved accuracy of localization formulas by 24% through simulation and pushed to employee production
- Created Python software simulating micromotion and multipath propagation to test case triangulation methods and discovered abnormality scenarios bypassing 8 localization formulas
- Improved accuracy of indoor localization equations by 33% using triangulation, trilateration, RSSI, ToF, AoA, and channel state information

Machine Learning Engineer Intern   (4 mth) May 2019 – Aug 2019
Cisco Systems Inc, San Jose, California
- Operated Python to detect statistical metric anomalies to identify origins of SD-WAN failures with 87% accuracy
- Wrangled time-series SD-WAN data with Spark and created 15 previously inaccessible datasets
- Designed 15 data visualizations and anomaly detections for SD-WAN failures to employee production
- Worked in rapid prototyping phases solving SD-WAN failures in the ML engineering networking team

Software Developer Intern   (4 mth) Sep 2018 – Dec 2018
ThoughtWire, Toronto, Ontario
- Extended automated tests and familiarized with containerization using C++ and Docker

Software Developer Intern   (4 mth) Jan 2018– Apr 2018
Kidney Clinical Research Unit, London, Ontario
- Developed a medical data exporter for Philips IntelliVue Bedside Patient Monitor using C++

PROJECT HIGHLIGHTS

Final-Year Design Project (In Progress, U.S. Patent Pending)
- Developing a smart handwashing device designed to encourage proper handwashing compliance to help in the fight against the spread of COVID-19 and other diseases
- Leveraging ML to detect sound and voice triggers via neural network classification of spectrogram analysis
- Leading team of four students
- Filed U.S. patent: https://patents.justia.com/patent/20210312788

Kaggle ML Competition Notebooks (Currently Active)
- Participated in +5 Kaggle ML competitions to improve ML skills in supervised and unsupervised learning
- Completion of ML courses on Kaggle and MIT Course 6.S191 Introduction to Deep Learning

Hackathons
- Hack the North (2021), IBM Watson Award @ Menlo Hacks, 1st Place Award @ Saratoga Hacks (twice awarded)

More projects available on GitHub
- https://github.com/MilindPathiyal/