MILIND PALIATH-PATHIYAL

1821 Redwood Creek, San Jose, California | 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, MATLAB, C++, Java, SQL, 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 | Bachelor of Applied Science in Systems Design Engineering (Honors Co-op Program) Sep 2017 - June 2022
Relative Coursework: Autonomous Mobile-Robots; Machine Intelligence; Pattern Recognition; Computational Neuroscience

SMB Capital (NYC Proprietary Trading Desk Firm) | Student Trader Apr 2021 - Aug 2021

WORK EXPERIENCE

Machine Learning Engineer Intern (8 mth full-time & 8 mth part-time during school) Sep 2020 – Dec 2021
Geminare Inc., Toronto, Ontario
- Developed 4 image classification and segmentation models with 80-87% accuracy and delivered to customer product
- Expanded cybersecurity product by producing a malware detection model identifying malicious malware with 86% accuracy
- Optimized 3 complex models with dimensionality reduction to achieve 87-95% accuracy
- Doubled performance of cybersecurity product by creating 4 time-series anomaly detection models
- Presented detailed reports of results, value propositions and strategy to ML team and CEO on a weekly basis

Computer Vision Engineer Intern (4 mth) Jan 2020 – Apr 2020
Cisco Systems Inc, San Jose, California
- Formulated indoor localization using Wi-Fi signals produced from wireless access points
- Boosted accuracy of localization formulae by 24% through simulation and pushed to employee production
- Identified critical situations bypassing 8 localization formulas by creating a micro motion and multipath propagation simulation
- Enhanced simulation by developing a 3D heatmap representing localized data points 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 visualize 15 previously inaccessible datasets
- Designed 17 data visualizations and anomaly detections for SD-WAN failures to employee production
- Worked in rapid prototyping phases in the ML engineering networking team and developed detailed bi-weekly reports to Head of Engineering

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

PROJECT HIGHLIGHTS

Final-Year Design Project (U.S. Patented)
- Developed a smart hand-washing device designed to encourage proper handwashing compliance to help in the fight against the spread of COVID-19and other diseases
- Leveraged ML to detect sound and voice triggers via neural network classification of spectrogram analysis
- Led team of four engineering students
- Filed U.S. patent: https://patents.justia.com/patent/20210312788

Cryptocurrency Time Series Forecasting (Kaggle Competition)
- Performed asset price predictions by utilizing data smoothing, feature ranking, visualizations, log returns, and correlations between assets
- Participated in +5 Kaggle ML competitions involving image recognition, sequential learning, and time-series forecasting,
- Completion of ML courses on Kaggle and MIT Course 6.S191 Introduction to Deep Learning

Udemy – Complete Data Science Bootcamp 2022 Certification (In-Progress)
- Statistical analysis, Python programming with NumPy, pandas, matplotlib, and Seaborn, Advanced statistical analysis, Tableau, Machine Learning with stats models and scikit-learn, Deep learning with TensorFlow

More projects available on Git Hub
https://github.com/MilindPathiyal/