Jung Park

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Education

- **New Jersey Institute of Technology - GPA: 3.7** — New Jersey, US
  Master of Science - Data Science(Statistics Track) — *May 2022 - Present*
  Key Courses: *Probability Theory, Stochastic Calculus, Stochastic Simulation, Statistical Inference, Statistical Learning, Machine Learning, Deep Learning*
- **New Jersey Institute of Technology - GPA: 3.4** — New Jersey, US
  Bachelor of Science - Applied Physics, Applied Mathematics (Minor - Computer Science) — *Sep 2018 - May 2022*
  Key Courses: *Dynamical system, Numerical Methods, Theoretical Physics, Mathematical Modeling, Statistics, Data Science*

Skills Summary

- **Languages**: Python, C++, MATLAB, SQL, R
- **Tools**: Visual Studio Code, Docker, GIT, MySQL, Excel
- **Platforms**: Linux, Windows, Arduino, Raspberry, AWS
- **Key Courses**: Probability Theory, Stochastic Calculus, Statistical Inference, Statistical Learning, Machine Learning, Dynamical system, Numerical Methods, Mathematical Modeling

Experience

- **NJIT Benjamin P. Thomas's Lab**
  Research Assistant — *Dec 2021 - Present*
  - **Analysing Remote Sensing Signals**:
    Analysing signals from LIDAR-like observation instrument using harmonic analysis. Task including abnormaly detection, frequency filtering, and event identification. [Matlab]
  - **Signal Classification using 2D Convolution Neural Network**:
    Build 2D Convolution Neural Network model to identify true event from time-series observation date. [Python]
- **NJIT Horax BioDatanamics Lab**
  Research Assistant — *May 2023 - Present*
  - **Parameter Estimation Using Approximate Baysian Computation Method**:
    Build model Parameter Estimator for Biophysical Model of Hippocampal Area CA1 Pyramidal Neuron Cell using Sequential Neural Posterior Estimation. [Python]

Awards

- **Wolters Kluwer DataSolve Competition 2022**
  1st place — *Nov 2022*
  - **Legal Document Classification Challenge**:
    Build NLP model for multi-label, multi-class legal document classification. Final Accuracy 88% achieved, using ensemble method and various NLP methods. [Python]

Projects

- **Remote Sensing Signal Classification using 2D Convolution Neural Network**:
  Build 2D Convolution Neural Network for time-series signal classification. Replace existing statistical event classification tool used in lab. [Python]
- **Legal Documents Classification**:
  Build multi-class,multi-label classifier using ensemble method. Final accuracy 89% achieved by combining various various methods. [Python]
- **Financial Time Series Prediction**:
  (work in progress) Using statistical time series analysis (ARIMA,GRACH), deep learning models(LSTM, GRU), and reinforcement learning to predict stock prices in near future. [R, Python, C++]
- **Model Parameter Estimation for Biophysical Model of Hippocampal Area CA1 Pyramidal Cell using Sequential Neural Posterior Estimation**:
  Building mathematical models of the CA1 pyramidal cell by estimating the model parameters using Sequential Neural Posterior Estimation (SNPE). By applying SNPE algorithm, inference at high dimensional parameter space became possible. [Master's Thesis]
- **Modeling of Thin Film Flow Driven by Surface Acoustic Wave and Gravity**:
  Analytical and numerical modeling of viscous thin film flow driven by gravity and surface acoustic wave, including derivation of governing equation and hard coded numerical scheme(Capstone Project) [Julia, MATLAB, C++]

Activities

- **NJIT Data Science Club**
  Executive board member, Conduct workshops for students in data science major. — *Sep 2022 - Present*
- **NJIT Society of Physics Students**
  Conducted online and offline tutoring. — *Sep 2018 - May 2022*