Unique Divine

[redacted]
[redacted]
UniqueDivine.xyz
linkedin.com/in/unique-divine/
github.com/Unique-Divine

EDUCATION

Columbia University **New York, NY**
M.S. Applied Mathematics (June 2021)
B.S. Applied Physics, minor in Applied Mathematics (May 2020)
Relevant Graduate Coursework: Data Mining, Machine Learning for Data Science, Natural Language Processing, Applications in Financial Machine Learning, Empirical Methods of Data Science, Mathematics for Data Science
Susquehanna University (3-2 dual degree program with Columbia University) **Selinsgrove, PA**
B.S. Physics, minor in Computer Science | Dean's list | Departmental honors (May 2018)

TECHNICAL SKILLS

Programming: Python (proficient, 6+ yrs), Bash/Shell, Java, SQL, UNIX / Linux
Libraries: PyTorch, Keras, TensorFlow, Scikit-learn, SciPy.stats, Pytest, NumPy, Pandas, Matplotlib, Plotly, Flask
Other: HTML, Vim, Git, PostgreSQL, MongoDB, Docker, Kubernetes

EXPERIENCE

IBM - Market Development & Insights
Data Science Intern (Jun 2021 – Present)
- ❏ I mainly perform clustering, sentiment analysis, and topic segmentation based on user comments and survey responses for an IBM Cloud product team. This involves wrangling terabytes of data made up of click streams, page visits, product usage, and net promoter score to derive actionable insights for the stakeholders.
- ❏ Regularly presenting visualizations and results to the VP of Client Advocacy as well as other senior leadership

Applied Technology Solutions, Inc. (ApTSi)
Artificial Intelligence Engineer Intern (Sep 2020 – Jun 2021)
- ❏ Developed novel ML applications to automate portions of the doctor-patient interaction with NLP
- ❏ Wrote RESTful web microservices and APIs with Spring Boot and Java
- ❏ Advised necessary DevOps changes, leveraging Docker and Kubernetes to containerize applications

Selective Corporate Internship Program (SCIP)
Marketing Analyst / Web Development Team Lead (Aug 2020 – Jun 2021)
- ❏ Executed marketing strategies and presented in-depth analysis as a consultant for SCIP's corporate partners
- ❏ Spearheaded YouTube initiative by generating, editing, and promoting content → increased viewership over 300%

Columbia University
Bioinformatics Researcher (Computational Genomics), with Dr. Itsik Pe'er (Aug 2020 – Feb 2021)
- ❏ Applied neural networks (PyTorch) to predict 3 phenotypes of rats based only on genetic variants (SNPs) in DNA.
- ❏ Simulated rat genomes by creating additional data with generative adversarial networks, improving accuracy by 15%

Undergraduate Researcher (Astrophysics), with Dr. Marcel Agüeros (Jan 2019 – May 2019)
- ❏ Performed spectral reduction, a method for correcting artifacts and instrumental defects in stellar spectra
- ❏ Built fluency with Linux OS, scripting, and management of large datasets

National Science Foundation Physics REU at University of Illinois Urbana-Champaign
Undergraduate Researcher (Machine Learning), with Dr. Joaquin Vieira (May 2019 – Aug 2019)
- ❏ Implemented convolutional neural networks with Python TensorFlow to predict gravitational lensing parameters several million times faster than traditional methods
- ❏ Added functionality for predictive modeling with custom architectures, ResNets, Inception-v4, AlexNet, and Overfeat

National Science Foundation Physics REU at Lehigh University
Undergraduate Researcher (Biophysics), with Dr. Slava Rotkin (May 2017 – Sep 2017)
- ❏ Developed techniques for localization of single-wall carbon nanotubes inside of C17.2 neural stem cells.
- ❏ Worked extensively with Raman spectroscopy to analyze the effects of nanotube concentration on cell health

Susquehanna University
Teaching Assistant & Tutor: Courses: Calculus, Physics I & II, Astrophysics I (Aug 2016 – May 2018)

PROJECTS

For additional information and projects: github.com/Unique-Divine

Algorithmic Stock Trading | May 2020 – Present | I created an automated trading approach that blends NLP with traditional indicator analysis using news sentiment. Eventually, I began leading and collaborating with a team of 5 professional developers to help with implementation. We've seen consistent alpha and ROI (20%+) in paper trades, live trades, and backtests. Stock trend classification accuracy is also above 90%. Tools: PyTorch, RNNs, Transformers, Alpaca API
Banknote Fraud Detection | I wrote a decision tree algorithm from scratch that outperforms Scikit-learn's. [repo]
Langevin Dynamics for Neural Network Optimization | Bayesian neural network implementations | [code] | [report]

OTHER SKILLS/INTERESTS: Japanese (advanced/fluent), saxophone, piano, guitar, reading, long-distance running