

Unique Divine



UniqueDivine.xyz



linkedin.com/in/unique-divine/



github.com/Unique-Divine

EDUCATION

Columbia University

M.S. Applied Mathematics

B.S. Applied Physics, minor in Applied Mathematics (GPA: 3.4)

New York, NY

(Anticipated 2021)

(May 2020)

Susquehanna University (3-2 dual degree program with Columbia University)

B.S. Physics, minor in Computer Science (GPA: 3.8)

Selinsgrove, PA

(May 2018)

Relevant Coursework:

- ❑ **Graduate Courses:** Machine Learning for Data Science, Partial Differential Equations, Probability and Statistics, Machine Learning with Applications in Finance, Deep Reinforcement Learning

TECHNICAL SKILLS

Programming: Python (proficient, 5 yrs), Bash/Shell, Java, Git, SQL, MATLAB, Linux (Ubuntu), C++

Libraries: PyTorch, Keras, TensorFlow, Scikit-learn, NumPy, Pandas, Matplotlib, SciPy.stats, Ignite, Skorch, Cython

EXPERIENCE

Applied Technology Solutions, Inc. (ApTSi)

Artificial Intelligence Engineer

(Sep 2020 – Present)

- ❑ Developing APIs and novel ML applications to automate portions of the doctor-patient interaction with NLP
- ❑ Leveraging Apache Spark, Docker, Kafka, REST APIs, Spring Boot, and Kubernetes to establish a robust, automated system to handling large datasets and build microservices

Selective Corporate Internship Program (SCIP)

Marketing Analyst

(Aug 2020 – Present)

- ❑ Regularly presenting as a marketing consultant to SCIP's corporate partners and executing marketing strategies
- ❑ Spearheaded YouTube initiative by generating, promoting, and editing content
- ❑ Performed in-depth analysis to urge best practices and identify key metrics, increasing viewership as much as 300%

Columbia University

Bioinformatics Researcher (Computational Genomics), with Dr. Itsik Pe'er

(Aug 2020 – Feb 2021)

- ❑ Applied neural networks (PyTorch) to predict 3 phenotypes based only on genetic variants (SNPs)
- ❑ Simulated rat genomes using generative adversarial networks to create more plentiful training data and achieved 15% higher classification accuracy
- ❑ Collaborated with PhD student to investigate deep learning's viability as a replacement for polygenic risk metrics

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 and BASH scripting

University of Illinois Urbana-Champaign Physics REU

Undergraduate Researcher (Machine Learning), with Dr. Joaquin Vieira

(May 2019 – Aug 2019)

- ❑ Implemented convolutional neural networks to predict gravitational lensing parameters for use in cosmology research with Python (TensorFlow) upwards of several million times faster than traditional methods
- ❑ Presented research results and wrote a report for this 10-week NSF REU
- ❑ Added functionality for predictive modeling with custom CNNs in addition to Inception-v4, AlexNet, and Overfeat

Lehigh University Physics REU

Undergraduate Researcher (Biophysics), with Dr. Slava Rotkin

(May 2017 – Sep 2017)

- ❑ Developed techniques for localization of single-walled carbon nanotubes inside of C17.2 neural stem cells.
- ❑ Worked extensively with Raman spectroscopy to analyze the effects of concentration size on cell health

Susquehanna University

Teaching Assistant & Tutor: Courses: Calculus, Physics I & II, Astrophysics I

(Aug 2016 – May 2018)

PROJECTS

Algorithmic Stock Trading

(May 2020 – Present)

- ❑ Leading and collaborating with a team of 6 professional developers to create an automated trading system
- ❑ Applying a novel approach to blending NLP with financial factor analysis using news as an indicator
- ❑ Achieve average ROI between 15-150% in one year backtests; Stock trend classification accuracy is 90%+
- ❑ Utilize: PyTorch, Lightning, RNNs (LSTM), and Transformers to predict stock sequences; Alpaca for paper trading

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

OTHER SKILLS: Stock trading, Japanese (advanced/fluent, ~3yrs), Saxophone, Excel, HTML, CSS, Time series analysis