PETER SIMONE

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EDUCATION

New York University, New York, NY	*May 2021*
M.S. Data Science	

TECHNICAL SKILLS

Coding Languages	Python, Javascript, Typescript, HTML/CSS, SQL, HiveQL, Bash
Frameworks/Tools	NextJS, ReactJS, NodeJS, Express, Starlette, Flask, Docker, Git, PWA
Databases/API	MongoDB, Firebase/Firestore, MySQL, Supabase, Pinecone, REST, GraphQL

WORK EXPERIENCE

Variable Space — *March 2022 - Present*
Senior Director, Full Stack Data Scientist — *New York, NY*

- Lead the data science and full stack web development initiatives of several products and technologies within our venture studio
- Collaborate with software engineers, researchers, UX designers, product managers, and data scientists, both internally and externally, to formulate, design, execute, and iterate on the development of novel products
- Design and conduct research studies using Machine Learning principles to optimize the utility of the study and create analytical reports, some of which have led to published studies in collaboration with our portfolio companies
- Build across our landscape of Web3, ML/AI, Health & Wellness, and Financial Wellness
- Developed a full-stack approach to simulating net-worth calculations, hosting it through a Flask REST API, and serving it through a custom frontend
- Build out tools integrating with OpenAI's API's to drive our AI initiatives and produce meaningful insights around the value and capabilities of AI as a whole
- Engineer several full-stack sites using NextJS and ReactJS as frontend/fullstack frameworks, along with NodeJS, Express, and the pythonic async Starlette framework, to develop standalone API's or integrate with our custom frontends
- Own the devOps and workflow of building products and deploying mainly to Vercel or Fly platforms
- Form valuable relationships with portfolio companies to ensure our product visions and technical capabilities are aligned, as well as attend conferences, networking, and building events on behalf of our company to stay up to date with novel technologies and create potential partnerships

Docket — *Jan 2023 - Apr 2023*
PWA Developer & Consulting — *Remote*

- In a part-time capacity, consulted on and developed the Service Worker component of a popular web application, in an effort to convert a native mobile app into a Progressive Web Application
- Built within the ReactJS framework, and utilized workbox's developer kit, to successfully build out the service worker lifecycle, deferred update methodology, and caching strategies
- Created informational videos and demos for the team, largely in an async manner, and ultimately handed off a complete service worker component for a beta release

American Express — *Sept 2021 - Present*
Manager, Risk Management - Digital Analytics — *New York, NY*

- Help build out digital capabilities, including development of personalization of Amex commercial sites, analyzing consumer clickstream data, and strategy of user identification
- Utilize Hive and pyspark to efficiently query large amounts of site interaction data, analyze results, and create models for personalization and key driver analysis.

- Communicate with the team internally and also third-party companies to integrate internal and external data sources and workflows, in order to drive efforts in site and offer personalization, ultimately helping increase company ROI

Personal Genome Diagnostics   *July 2017- July 2019*
Analyst - Software Development & Analysis   *Baltimore, MD*
- Provided early analytical and bioinformatics support to help develop an FDA approved genomics product
- Streamlined statistical analyses of NextGen Sequencing outputs, helped optimize biocomputational methods, including random forest and regression models, and created workflows for aggregating and visualizing data
- Produced quantitative insights and data visualizations, which I presented weekly to company stakeholders and influenced product decisions

PROJECTS

Portfolio Site
- Designed, developed, and deployed a customizable portfolio website using ReactJS framework
- Engineered several animations, custom javascript solutions, and advanced css

Generalizable Deep Image Prior
- Built on an existing paper to experiment with convolutional neural networks, using python and pytorch framework for deep learning
- Created pipelined approaches for running neural networks on several images, to observe the capabilities of these networks in storing prior information of natural images
- Presented findings of image processing and network prior information to NYU professor, in addition to writing a research paper on the results.

Sports Betting App
- Developed a full-stack web application to provide users the ability to track their sports bets, analyze their past performance, assess general quantitative insights, and interact with other users
- Built out the application using MongoDB, React.js, Node.js, and the Express framework to create the backend REST api, dynamic frontend, handle user login, and integrate with internal and external API's.

Biodiesel Price Forecasting - Capstone Project
- Collaborated with an energy company to develop an asynchronous price forecasting model using advanced time series approaches
- Designed a GRU encoder-decoder deep learning model, adopted through extensive literature research, which was validated using time-dependent holdout sets, outperforming a baseline ARIMA model
- Presented findings to the company and handed over the work for internal use

PUBLICATIONS

- Co-author: "Characterization of tumor mutational burden (TMB), PD-L1, and DNA repair genes to assess correlation with immune checkpoint inhibitors (ICIs) response in metastatic renal cell carcinoma (mRCC)." Poster presented at: American Society of Clinical Oncology Annual Meeting