Andrew Yang

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EDUCATION

Rutgers University – Rutgers Business School   **New Brunswick, NJ**
Bachelor of Science in Finance & Business Analytics and Information Technology (Double Major)   *Graduated May 2016*

WORK & LEADERSHIP EXPERIENCE

2U, Inc.   **Remote / New York, NY**
FinTech Curriculum Engineer, Academic Services   February 2019 – Present

- Intertwines the philosophies of technical expertise, project management, and instructional design to create a consistent and exceptional student learning experience that seeks to synthesize complex technical concepts into easy to understand direction, wrapped in an overarching financial narrative and flow for the course.
- Solution architects and develops use-case driven applications within the domain of Finance and Technology (or FinTech), using various technologies such as **Python**, **Pandas, Matplotlib**, **APIs**, **PyViz**, **SQL**, **Time-Series Analysis**, **Machine Learning** (Classification, NLP, Deep Learning), and **Blockchain** (General Cryptography, Geth/Ganache, Solidity, Remix).
- Composes easy-to-understand instructional content filled with contextual information to teach students how to both develop financial applications but more importantly why, ranging from high-level statistical concepts such as mean, standard deviation, correlation, normal probability distributions, and confidence intervals to Finance domain-specific activities such as diversification, portfolio forecasting (Monte Carlo Simulations), and algorithmic trading (signal generation, backtesting, and evaluation).
- Provides production support of live courses with respect to student feedback and Net Promoter Scores (NPS) to ensure continual improvement of course material and long-term international scalability.
- Architected, implemented, and lead a team of two to deliver the successful launch of the FinTech pilot course that was lauded as the shortest amount of time allocated for development with the highest quality results (supported by NPS key metrics), significantly driving client/university engagement and overall critical reception.
- Produced an algorithmic trading framework that connects to the Kraken API and paper trades BTC/USD using a short-long dual moving average crossover strategy in real-time (streams every second).
- Developed a Random Forest trading model that accepts multiple trading signal features (crossover points of EMA closing prices, EMA daily return volatility, and Bollinger Bands) to then predict next day positive or negative returns and employ a long-short-hold strategy.

Trilogy Education Services (acquired by 2U)   **Somerset, NJ**
Teaching Assistant, Rutgers Data Science Bootcamp   September 2018 – March 2019

- Taught 3 classes per week over a 24-week program: Monday nights, Wednesday nights, and Saturday afternoons.
- Ensured student success with hands-on instruction of a diverse array of technologies and concepts such as **Pivot Tables**, **VBA Scripting**, **Python**, **NumPy**, **Pandas**, **Matplotlib**, **APIs**, **MySQL**, **MongoDB**, **ETL**, **HTML**, **CSS**, **Bootstrap**, **JavaScript**, **D3.js**, **Leaflet.js**, **Tableau**, **Hadoop**, and **Machine Learning**.
- Hosted office hours and individual tutoring for students, with emphasis on helping students establish a developer mindset to problem-solving.
- Graded class exercises and handled classroom attendance.

Knowledgent Group, Inc. (acquired by Accenture)   **Warren, NJ**
Big Data Engineer, Engineering Competency   June 2016 – August 2018

- Garnered the '**Knowledgent Rising Star**' award for 2017.
- Interfaced with clients on a day-to-day basis to coordinate and implement key project deliverables using an **Agile SDLC Model**.
- Architected the re-design of existing ETL processes for a retail client's email marketing dashboard to allow for daily vs weekly data loads, incorporating **AWS EC2**, **S3**, **Redshift**, **SQL**, and **Bash Shell** scripting technologies.
- Managed and optimized AWS Redshift, accounting for basic **CRUD** operations and key definitions for memory allocation, compression, data distribution, and user concurrency, resulting in more efficient query execution times.
- Developed a file upload script utilizing **Control-M** and the **AWS CLI** to periodically scan a directory for .csv files, parse file names, and upload corresponding data to AWS S3 using a parameterized naming hierarchy for file organization.
- Designed and implemented a GUI using **JavaFX** to interface with a data ingestion application exporting data from a **RDBMS** to **Hive**, accounting for UI error handling, properties importing/exporting, and multi-threading.
- Created a JSON data ingestion application using **Java** and **Bash Shell** Scripts to perform automated data profiling of JSON file metadata, Apache Hive table creation, and initial data load.
- Implemented **REST API** functionality using the **Java Spring Framework** to enable a biotechnology client's web application deployed using **Tomcat** to query data from a **Hive** database.

- Pioneered an automated API testing solution using a combination of **GitLab**, **Postman API**, and CI/CD tool **Jenkins** to manage the build, deployment, and API testing of a web application in a single operation.
- Conducted three rounds of probabilistic **MDM** matching for multiple customer data sources using the **IBM Initiate MDM** service.
- Established a data workflow using **Airflow** to scan file directories and upload files to AWS S3 in real-time.

New York Life Insurance Company   **New York, NY**
Product Analyst, Product Management Team   April 2015 – February 2016
- Conducted research of hundreds of U.S. and global equity mutual funds to promote company investment management strategies and position its mutual funds for alpha generation.
- Analyzed industry and economic data to formulate trends and opportunities for marketing and sales to increase exposure of company mutual funds and generate additional net cash flows.
- Constructed algorithmic excel spreadsheets working with Morningstar Direct to produce key analytical reports; reducing publishing time by more than 90%.
- Managed and updated monthly/quarterly reports and existing competitive analysis profiles for use by internal and external wholesalers to stimulate sales of company products.

New York Life Insurance Company   **New York, NY**
Project Management Coordinator/SCRUM Master, Annuities Investment Technology   September 2014 – April 2015
- Coordinated large scale, complex projects valued up to $3,000,000 and oversaw all SDLC phases of projects to deliver strategic initiatives in an effective and timely manner.
- Validated financial forecasts and provided ongoing reconciliation of resources and other project expenditures to ensure proper allocation of funds and eliminate budgetary deficits.
- Managed employee time/resource allocations using CA Clarity PPM to provide an aggregate overview of hours-to-completion of multiple projects and account for strategic initiative progression.
- Created and supervised an idea intake process flow for the facilitation of new and unrealized projects, thereby ensuring a streamlined approach and reducing implementation times by weeks.

Rutgers, The State University of New Jersey   **New Brunswick, NJ**
Desktop Support/Web Developer, Office of Enrollment Management   December 2013 – May 2014
- Designed and developed Rutgers Enrollment web pages using HTML and CSS.
- Managed a database of service requests and interfaced directly with personnel to diagnose technological issues and devise solutions.
- Diagnosed, disassembled, and repaired faulty desktop/laptop hardware.
- Extracted daily server backup tapes for data security processing.

TECHNICAL SKILLS & INTERESTS

Technical Skills:

- Python
- Pandas
- Time-Series Analysis
- Monte Carlo Simulations
- Machine Learning
- Java
- Hadoop
- Hive
- Unix
- Bash Shell Scripting
- Spring Framework
- SQL
- Solidity

- Cryptography
- Blockchain
- AWS EC2
- AWS S3
- AWS EMR
- AWS Redshift
- MongoDB
- Jupyter Notebook
- APIs
- Database Optimization
- Data Architecture
- ETL
- MDM

- Matplotlib
- Panel (Dashboard)
- Plotly Express
- Git
- Jenkins
- Airflow
- HTML
- CSS
- Javascript
- Tableau
- Bootstrap
- D3.js
- Leaflet.js

Interests:

- Trading
- Investing
- Programming
- Traveling

- Martial Arts (Kickboxing)
- Piano
- Entrepreneurship
- Camping/Backpacking

- Music Production
- Chess
- Video Games
- Fitness