

ABHI BHANDARI

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EDUCATION

University of Pennsylvania, College of Arts and Sciences, The Wharton School

- Bachelor of Arts in Mathematics; Minor in Statistics **Expected May 2023**
 - Major GPA: 3.83/4.00 | Cumulative GPA: 3.67/4.00
- *Relevant Courses:* Abstract Algebra (Graduate), Advanced Linear Algebra, Digital Signal Processing, Probability Theory, Stochastic Processes, Statistical Inference, Programming Languages & Techniques

PROFESSIONAL EXPERIENCE

Jolt Advantage Group, Data Science Intern

June 2021 – Sept 2021

Jolt Advantage Group is a pureplay robotic process automation service provider that provides businesses with UiPath automation frameworks.

- Developed a Selenium web-scraper to gather UiPath automation workflows (.xaml file format) for source code embedding/natural language processing from GitHub and UiPath Marketplace. Scraped 10,000,000 data points.
- Created a tool to transform workflow data into abstract syntax trees, performed affinity propagation clustering to generate label data for workflows with the networkx and scikit-learn libraries.
- Constructed and tested graph convolutional neural network, tuned hyperparameters for workflow classification using the TensorFlow and Deep Graph Learning libraries. Achieved >90% prediction accuracy.

Wharton Analytics Fellows, Senior Data Science Consultant

Aug 2020 – Dec 2020

Wharton Analytics Fellows is a highly selective fellowship program comprised of advanced undergraduates, MBAs, and PhDs devoted to providing technical data science consulting to clients.

- Worked with Neuroflow, a digital health company applying artificial intelligence and machine learning to address issues such as depression and anxiety.
- Performed analysis and research to derive data-driven insights into factors of mental health issues.
- Predicted customer dropout with >96% accuracy using a probabilistic model (the beta geometric negative binomial distribution) combined with K-means clustering using both time series and cross-sectional data.

Dipsea Capital, LLC. Quantitative Research Intern

July 2020 – Sept 2020

Dipsea Capital, LLC. is an investment management company specializing in providing its investors with uncorrelated returns in financial markets.

- Conceived, developed from scratch, and optimized trading strategies with the scientific method utilizing econometric models (SARFIMA, EGARCH) against over 1 billion time series data points.
- Utilized principles of chaos theory and fractal statistics to create a rescaled-range algorithm to determine persistence (mean-reverting tendencies) of financial time series, expanding the relative P&L of pairs trading strategies by 2%.

Link3D, Software Engineering Intern

May 2020 – Aug 2020

Link3D offers planning, simulation, and data management tools required to optimize, continuously improve, and scale their 3-D manufacturing environments.

- Developed analytics software designed to derive estimated build time of an additively manufactured STL model from metadata such as layer height and tool jump time, as well as hatch/contour data such as tool path and tool acceleration using Python.
- Performed data preprocessing, cleaning, and labeling to train and parameter tune random forest classification algorithm to distinguish structures within the model with >98% accuracy using centroid dispersion, structure size, and intra-layer mesh/scaffolding data.

LEADERSHIP & EXTRACURRICULAR EXPERIENCE

- **Penn School of Engineering & Applied Sciences, Undergraduate Researcher** **Jan 2021 - Present**
- **Penn Quantitative Trading Club, Systematic Strategies Researcher** **Aug 2019 - Present**
- **The Signal, Quantitative Marketing Team Lead** **Jan 2021 - Present**
- **Sigma Phi Epsilon Fraternity, Philanthropy Committee Member** **Jan 2020 – Present**

SKILLS AND INTERESTS

Technical: Proficient in Java, Python, SQL, R, OCaml, Data Structures and Algorithms, Machine Learning, Big Data Analytics, Econometric Modeling, MATLAB, and MS; GitHub