# PHILLIP CHAU

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## Education

**University of Pennsylvania | School of Engineering and Applied Science** | Philadelphia, PA *May 2023*

- *Candidate for Bachelor of Science in Computer Science*
- **Cumulative GPA:** 3.92/4.00 | **Minor:** Statistics, Mathematics, Data Science
- **Relevant Coursework:** Big Data Analytics, Scalable and Cloud Computing, Machine Learning, Data Structures and Algorithms, Database and Information Systems, Probability, Python for Data Science, Statistical Inference

## Experience

**NASA | Software Engineering Intern** | Mountain View, CA *June 2020 – December 2020*

- Developed full-stack platform with React, Express.js, Node.js, MySQL and DynamoDB to manage real time aerial vehicles
- Simulated and tracked potential collisions and flight plan mis-compliance, visualizing results with Google Maps API
- Wrote Python and Linux scripts to gather and upload real time GPS flight data to AWS database from IoT device via AWS Greengrass

**STEM-Away | Machine Learning Intern** | Santa Clara, CA *June 2020 – July 2020*

- Created web crawlers through BeautifulSoup to extract data (36k+ entries) from Discourse Forums
- Performed data cleaning, analysis, pre-processing and feature engineering through Python, Pandas, Numpy
- Developed forum classifier using BERT, TF-IDF, Word2Vec NLP models to predict associated forum for posts

**Wharton Customer Analytics | Senior Analyst** | Philadelphia, PA *February 2021 – Present*

- Created Time Series Forecasting and Econometric Models using 100,000+ consumer data entries to predict impact of social marketing strategies on client's revenue streams and brand affinity and presented recommendations to client

## Projects

**PennBook | Personal Project** | Philadelphia, PA *October 2020 – December 2020*

- Created secure and scalable Facebook clone with features including user profiles, chats, content feeds
- Built with Node.js, JQuery, Express.js, AWS DynamoDB and hosted on AWS EC2
- Designed scalable news recommendation algorithm and news feed page using Apache Spark

**Crash Prediction Model | Personal Project** | Philadelphia, PA *November 2020 – December 2020*

- Analyzed Pennsylvania Vehicle Crash Data over a decade through EDA with Python, Pandas, Seaborn
- Created classification models to determine fatal crashes based on various driving-related factors
- Performed data modeling through Random Forest, Logistic Regression, Naïve Bayes

**Fake News Analysis | Personal Project** | Philadelphia, PA *April 2021 – May 2021*

- Analyzed 10,000+ tweets about 2016 US Election through EDA with Python, Pandas, Plotly
- Cleaned and tokenized text and conducted sentiment analysis to understand factors that contribute to spread of fake news
- Created topic model of fake news through LDA and trained Naïve Bayes and Random Forest models to classify fake news

**COVID Dashboard | Personal Project** | Philadelphia, PA *March 2021 – May 2021*

- Created visualization tool to analyze how socioeconomic factors impacted Covid cases and deaths across America over time
- Integrated NYT and Twitter API for real time news and enabled user authentication via Facebook and Google
- Built with React, Express.js, SQL, Firebase, AWS DynamoDB

## Skills

**General**: Java, Python, JavaScript, Bash, Git
**Data Science**: Pandas, Numpy, Plotly, Scikit-learn, NLTK, Apache Spark, SQL, AWS DynamoDB, AWS S3, MongoDB, Neo4j
**Web:** React, Redux, HTML, CSS, jQuery, EJS, Node.js, Express.js
**Additional**: Problem Solving, Innovative, Committed, Patient, Articulate, Collaborate, Agile