# Aditi Chauhan

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## **EDUCATION**

## University of Washington

Seattle, WA

Bachelor's in Applied Physics and Astronomy, Minor in Data Science

Aug. 2017 - present (June 2021)

#### SKILLS

Relevant Coursework: Datastructures and Algorithms, Web Programming, Scientific Computing, Database

Management, Machine Learning, Artificial Intelligence, Statistics, Prototyping, Usability Testing

Languages: Java, Python, SQL/NoSQL, Spark, JavaScript, HTML/CSS

#### EXPERIENCE

Bootcamp Intern

Oct. 2020 - Present

Gesture @C21

• Support Bootcamp Managers and Leads in preparing running and closing each cycle of the program.

- Manage participant data, conduct exit interviews, schedule and attend weekly meetings.
- Trained in developing a mission mindset, professional work ethics and communication skills.

## Undergraduate Research Assistant

Jan. 2020 - Present

UW Elementary Particle Experiment Group

Seattle, WA

Seattle, WA

- Studying HEP Particle Tracking using metric learning and Graph Neural Networks.
- Tested robustness of model by introducing noise into dataset and calculating tracking efficiency, purity.
- Currently testing robustness against misalignment in data and alternate graph constructions.
- Results presented in the Conference for Undergraduate Women in Physics 2021 Abstract: U17.00009: Robustness Studies against Noise in the IML-2020 EXA.TrkX Particle Tracking Pipeline.
- Co-authored proposed paper for 25th International Conference on Computing in High-Energy and Nuclear Physics.

# Projects

## MathRead | Google API, Java

Oct. 2019

- Demoed app at **DubHacks 2019**.
- An application designed for blind people who encounter math equations daily.
- Programmed the extraction of text from images using Google Vision API.
- Converted the text to speech and read it out loud (Google Text-to-speech).
- Successfully converted simple algebraic equation with the help of openCV library.

## US Census Analysis | Python, ML, XGBoost

Jul. 2019

- Predicted the income of US Citizens after cleaning, visualizing, one-hot coding data accordingly.
- Experimented with various ML models/ algorithms to test for over-fitting, loss, recall and accuracy.
- Achieved highest accuracy in class (87.5%).

#### Search Engine | DS&Algos, Java

May. 2019

- Implemented heap to sort data.
- Used sets and dictionaries to implement TF-IDF ranking.
- Determined quality or rank of webpage using inbound links and graphs.
- Combined the above to build a functioning search engine.

## Flight Statistics | Spark, Hadoop, AWS, Java

Mar. 2019

- Used US Bereau of Transportation Statistics data in Parquet format to access flight details.
- Deployed code on AWS using Elastic Map Reduce.
- Executed flight path and destination queries with results returned as a JavaRDD.

## Flight Booking Service | SQL, Azure, Transaction Management

Feb. 2018

- Java customer application that connects to database in Azure.
- Implemented SQL transactions to guarantee ACID properties in the DBMS.
- Allows user to search, book, cancel flights through CLI.