# Ashna Jain

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## EDUCATION

**Unniversity of Massachusetts Amherst**  Amherst, MA
*Bachelor of Science in Computer Science; Commonwealth Honors College*  *Aug. 2020 – May 2024*

**Algonquin Regional Highschool**  Northborough, MA
*High School Diploma*  *Aug. 2016 – May 2020*

## TECHNICAL SKILLS

**Languages**: Java, Python, C, JavaScript
**Developer Tools**: Jupyter Notebooks, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
**Libraries**: pandas, NumPy, Matplotlib, Tensorflow, OpenCV
**Research Interests**: Task-oriented Dialouge Systems, NLP, Unsupervised Machine Learning

## ACADEMIC PROJECTS

**Early Research Scholars Program**  Sept 2021 – Present
*Machine Learning, Python*  *Amherst, MA*

- Working at the Center for Intelligent Information Retrieval (CIIR) on a task-oriented chatbot for academic conference planning for attendees
- Automatically match relevant research papers and live-session to user interests through natural conversation processing using sci-kit and BERT. Implements greedy-algorithm to generate daily schedule for attendee to maximize coverage
- Engaged in the full life cycle of agile software development from conceptualizing research proposals to assigning tasks to team members

**Attention-Based Image Captioning**  June 2020 – Aug. 2020
*Python, Tensorflow, OpenCV*  *Northborough, MA*

- Tokenized words and sentences from JSON dictionaries to build computer vocabulary
- Implemented Tensorflow based algorithm used to train the neural network to identify certain parts of an image and interpret the image through computer-generated sentence

**Spotify Data Manipulation**  Nov. 2021
*Matplotlib, Pandas, Unsupervised Learning, Decision Trees*  *Amherst, MA*

- Used python library, Spotipy, to access the Spotify API in order to extract data
- Loaded data into a Pandas data frame in order to access, audio features such dance-ability, loudness, acousticness for all tracks
- Performed statistical analysis using k-Means clustering to classify data based on certain attributes such as tempo and dance-ability

## EXPERIENCE

**Princeton University Ai4All Intern**  June 2021 – Aug. 2021
*Machine Learning, Python*  *Princeton, NJ*

- Curated lesson plans and activities for high school students learning Artificial Intelligence
- Educate students on AI/ML topics including, Logistic Regression, Forward/Back Propagation, Naive Bayes, Classification, K-Means Clustering, and Neural Networks
- Supervised office hours to assist students with basic debugging or conceptual questions
- Provided course feedback and criticism to discussions regarding curriculum improvement

**Private Math Tutor**  Aug. 2020 – Present
*Algebra 1+2, Pre-Calc, SAT+PSAT Math*  *Northborough, MA*

- Developed and solicited clients for business for students in grades 6-12
- Train students to fully understand the foundational concepts of mathematics, various processes of calculations and alternative methods of calculations