Manan Talwar

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Education

University of Massachusetts Amherst   **January 2023 - Present**
Master of Science in Computer Science   *Amherst, MA*

University of Massachusetts Amherst   **Aug. 2020 – Dec. 2022**
Bachelor of Science in Computer Science and Mathematics (GPA: 3.93/4)   *Amherst, MA*

Relevant Coursework

- Data Structures & Algorithms
- Theory of Computation
- Reasoning about Uncertainty
- Scientific Computing
- Information Retrieval
- Programming Methodology
- Machine Learning
- Systems Design
- Algorithm Design
- Database Management
- Algorithms for Data Science

Relevant Experience

Data Science for Common Good Fellow & NLP Engineer   **June 2022 – August 2022**
Center for Data Science   *Amherst, MA*
- Developed two efficient scrapers to aggregate app reviews from Google Play Store and Apple App Store
- Developed a SpaCy classification pipeline based on the RoBERTa transformer neural network model to run on AWS.
- Developed a PostgreSQL database to store app reviews as well as model characteristics.

Software Engineer & Business Developer   **Sep 2021 – December 2022**
BUILD UMass   *Amherst, MA*
- Conceptualized a business model and tech stack for two early stage startups.
- Migrated the user interface of a partner's app from Django to ReactJS.
- Served as Tech Lead for automatic controversy detection projects for a partner.

Supplemental Instructor   **Aug 2021 – December 2022**
College of Information & Computer Sciences, UMass Amherst   *Amherst, MA*
- Led two 75 minute review sessions every week for approximately 300 students every semester.
- Created learning resources for CS187: Programming with Data Structures and CS250: Theory of Computation.

Selected Works

Lightning: Integrated GUI and REST API | *NodeJS, MongoDB & React*   **September 2022 - December 2022**
- Developed an MVP REST API and a GUI that summarizes time series data in a visually appealing way for ISO New England under an agile based scrum framework.

AppDanger: Aggregation of harmful applications | *SpaCy, PostgreSQL & AWS*   **June 2022 - August 2022**
- Created a RoBERTa classification pipeline to help parents protect their children from technology-driven exploitation and deployed it in an EC2 bucket on AWS.

Empathize: A chatbot for mental health support | *Python*   **November 2021 - January 2022**
- Developed an AI chatbot to provide mental health support using a deep neural network learning model for training and predicting and NLP tools for data preprocessing and evaluation.

Technical Skills

Languages: Python, Java, C/C++, JavaScript/TypeScript, SQL, Ruby, Swift, MATLAB
Frameworks: React, Ruby on Rails, Flask, Django, Bootstrap, SQL, Git, LaTeX, JUnit, NodeJS
Technologies: Linux, AWS, PostgreSQL, MongoDB, Google Cloud, GitHub, Figma, Office Suite, Adobe Suite, GSuite

Honors

Dean's List Award: Fall 2020, Spring 2021, Fall 2021, Spring 2022, Fall 2022
Chancellor's Award: Recipient of a scholarship worth $16000 per year to fund Bachelor's degree at UMass.
Dr. Howard Smith Summer Research Award 2022: Awarded $2500 in recognition of my exceptional summer research during Summer 2022.
Manning CICS Bay State Fellowship: Recipient of the prestigious and highly competitive fellowship that provides direct admission as well as a tuition waiver for Master's degree at UMass CICS, starting Spring 2023.

Extracurricular Experiences

UMass ACM (Executive Member & Design Secretary), **HackUMass IX** (Organizer and Tech Lead), **Innovation and Entrepreneurship Scholar** (Isenberg School of Management), **BUILD UMass** (Tech Lead & Executive Member).