Aditya Kumar Roy Chowdhury

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# EDUCATION:

University of Massachusetts, Amherst Expected Graduation: 2023

*Bachelor of Science (B.S.) in Computer Science* GPA: 3.98

*Member of the Commonwealth Honors College* Dean’s List: All Semesters

COURSEWORK: Web Programming, Operating Systems, Introduction to Algorithms (Honors), Programming with Data Structures, Computer Systems Principles, Artificial Intelligence, Reasoning Under Uncertainty

LANGUAGES: JavaScript, Python, Java, C, HTML, CSS

TECHNICAL SKILLS: Frontend and Server-side Web development, APIs, Data Structures, Algorithms OTHER TECHNOLOGIES: Bootstrap, Node.js, MongoDB, React, Scikit Learn, Pandas, Matplotlib

# EXPERIENCE:

**Undergraduate Research Volunteer– UMass CICS** (January 2021):

* Completed a research project on making energy generation more efficient and cost-effective, under the guidance of PhD Researcher John Wamburu, in the UMass Lab for Advanced Software Systems. Learned to process raw electricity generation and weather data into useful dataframes for binary predictor models using Python and Pandas.
* Implemented and compared binary predictor models for the purpose of predicting peak days of electricity usage based on factors like date and weather patterns.
* Gained critical knowledge of machine learning techniques utilized in academic research. **Volunteer leader of student group for teaching mathematics to primary-school students - Zilla Parishad Primary School** (2018-2019):
* Designed and implemented lesson plans appropriate for learners of all proficiency levels.
* Planned visual teaching methodologies to overcome the language barriers.
* Successfully taught critical mathematical concepts to young learners using self-devised plans.

# PROJECTS:

**Fully Functional Blog Website** Viewable on GitHub

* Developed a functioning blog-website that utilizes a wide variety of frontend and back-end technologies including Bootstrap, JavaScript, Node.js, Express.js, MongoDB, and EJS.
* Gained hands-on experience of the languages and frameworks used in a large Full-stack web development project and how to connect databases, server-side technologies and frontend technologies to create a product that can be used to publish information on the net.

**Automated Newsletter Signup Link:** ancient-plateau-21960.herokuapp.com/

* Implemented a signup page for a newsletter that utilizes the Mailchimp API to manage users with Node.js and Bootstrap styling.
* Developed the ability to use APIs to increase functionality of my websites.

**AI algorithm for Connect 4**

* Designed an algorithm using Python which attempts to find optimal moves given a custom Connect 4 board that a human can play against.
* Implemented Depth-limited Minimax search with Alpha-Beta pruning for improved performance, and a self-designed evaluation function to help the algorithm find competitive moves.

# ONLINE COURSES COMPLETED:

Complete Python Bootcamp on Udemy, The Complete 2020 Web Development Bootcamp on Udemy