Arjun Bharadwaj

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768 Eagle Ave. Ann Arbor, MI 48103

Education

University of Michigan **Ann Arbor, MI**
Bachelor of Science in Computer Science *April 2027*
Coursework: Data Structures and Algorithms, Discrete Mathematics, Computer Science Pragmatics, Microeconomics, Macroeconomics, Statistics and Data Analysis

Technical Experience

VOID Tech **Ann Arbor, MI**
Software Developer *January 2025 - Current*

- Developing Open Course, a full-stack web application using Next.js, React, and Supabase, enabling UMich students to form study groups, share resources, and schedule review sessions
- Built an interactive study session system with real-time post updates and user authentication via Supabase Auth
- Implemented a React-based study group dashboard featuring dynamic post creation, event scheduling, and filtering by tags, location, and max participants

Michigan Robosub **Ann Arbor, MI**
Software Team Member *January 2025 - Current*

- Contributing to the autonomous underwater vehicle (AUV) project, focusing on motion control, navigation, and perception using Python, ROS, and PID controllers
- Developing algorithms for path planning and object detection, optimizing the robot's ability to maneuver underwater
- Working with a multidisciplinary team to integrate software with mechanical, and electrical subsystems

Michigan Blockchain Club **Ann Arbor, MI**
Development Team *January 2024-Current*

- Completed the 2024 Spring Cohort, focusing on blockchain, cryptocurrencies, and decentralized finance
- Developed a blockchain-based energy sharing system, enabling homeowners to sell excess energy to others using smart contracts
- Engaging in discussions and staying updated on emerging trends in Web3 and decentralized applications

Project Experience

NBA Performance Prediction Model - *Wolverine Sports Analytics* **Ann Arbor, MI**
Project Team Lead *January 2025-Current*

- Leading a project to predict NBA player performance (points, rebounds, assists) before each game
- Web scraping historical team, opponent, and player statistics using BeautifulSoup to build a structured dataset
- Utilizing feature engineering to identify key metrics influencing player performance, such as usage rate, effective field goal percentage, and defensive matchups
- Developing predictive models using Python, Pandas, and regression techniques to analyze trends and optimize forecast accuracy

Machine Learning Text Classifier *March - April 2024*

- Developed a C++ program using machine learning and NLP that could identify the topic of class forum postings
- Predicted the subjects of these posts using a simplified version of the Bernoulli Naive Bayes Classifier
- Implemented methods for parsing CSV data, tokenizing text, computing log-likelihoods, and managing vocabularies

Additional Skills

- Programming Languages: C++, Java, JavaScript, Python, React, Next.js
- Technologies: ROS, PID Control, Supabase, Bash, Beautiful Soup, Git, SSH, Visual Studio, Microsoft Office

Achievements

Awards/Honors: National Merit Scholar, Varsity Tennis Captain, Volunteer Tennis Coach for Adaptive Tennis Program - providing specialized coaching for players with disabilities and special needs