

Abdul Basit Tonmoy

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EDUCATION

B.A., Computer Science and Mathematics (Minor in Physics), Wabash College, Crawfordsville, IN May 2027

Honors & Awards: Presidential International Scholarship, Dean's List, Polly Award GPA: 3.714/4.000

Relevant Course: Data Structures and Algorithms, Object-oriented Programming, Machine Organization, Data Science, Numerical Analysis, Stochastic Simulation, Autonomous Robotics, Electronics, Classical Mechanics, Fluid Dynamics, Electro-Magnetism, Thermodynamics and Relativity, Calculus I & II, Linear Algebra, Combinatorics

Technical Skills: Python, SQL, JavaScript, C; MERN Stack, React, Redux, NumPy, Pandas, Beautiful Soup, Matplotlib, PyTorch; ESM_fold, Nvidia NIM, Dialogflow, OpenCV, Tableau, Transformer Architecture; HTML, CSS; Microsoft Office, Mathematica, Excel; Fluent in English, Bengali, Hindi, Urdu

PROFESSIONAL EXPERIENCE

Data Analyst, Auxiliary Services, Wabash College, Crawfordsville, IN Jan 2024 – Present

- Conducted a 15+ year fleet utilization analysis using Python and Excel, identifying cost-saving strategies.
- Optimized fleet utilization, leading to cost savings and increasing projected revenue by \$3,200 per vehicle.
- Optimized acquisition strategy, generating annual savings of \$20,160 by advocating acquisitions over rentals during peak demand.

Summer Software Engineering Intern, Motorpool, Wabash College, Crawfordsville, IN Summer 2024

- Built a real-time data dashboard using React, Redux, and Material-UI, increasing data accessibility for over 20 years of fleet data.
- Enhanced data security with authentication mechanisms and advanced search functionality, reducing search time by 30% and boosting user experience.
- Optimized backend data handling (MongoDB and Node.js), increasing efficiency by 40%, ensuring scalability
- Developed and deployed a Dialogflow chatbot, automating 70% of common user queries, boosting engagement by 25%, and cutting support response time by 50%.

Teaching Assistant, Physics Department, Wabash College Sep 2024 – Present

- Led discussions and provided one-on-one tutoring for 40+ students in physics, leading to improved grades and increased understanding of core concepts. Assisted with lab experiments and helped students grasp complex concepts, improving class performance.

EXTRACURRICULAR EXPERIENCE

Vice-president, Muslim Students' Association, Wabash College Nov 2023 – Present

- Organized weekly Jumma prayers, interfaith events, and cultural exchanges for 500+ participants, fostering inclusivity and community engagement across campus.
- Collaborated with other Indiana based universities and organized Inter-MSA events.

Founder and Vice-president, Robotics and IoT Club, Wabash College Aug 2024 – Present

- Founded and led the Robotics and IoT Club, collaborating with faculty to offer 20+ students hands-on experience in AI and IoT technologies.
- Developing AI-powered autonomous weather drone, integrating OpenCV, PyTorch, and Arduino with Raspberry Pi for edge processing, utilizing LiDAR, GPS, and Python-based multi-sensor fusion.

PROJECTS

Team Lead, HackEnzyme: HackHarvard 2024 Oct 2024

- Led team in developing a protein-generation model using Roslab.Prot_T5_Large and a custom 35,000+ enzyme-chemical dataset, achieving 15% higher accuracy and 25% faster processing.
- Implemented and optimized a full-stack bioinformatics application, integrating ESM-Fold for 3D protein structure mapping, enhancing computational efficiency by 20%.