David Mbagwu

davidmbagwu@gmail.com| (832) 428-1471 | linkedin.com/david-mbagwu | github.com/DavidMbagwu | Houston, TX

EDUCATION

McNeese State University – Lake Charles, LA, USA *Graduating May 2027*
Bachelor of Science in Computer Science **GPA**: 3.79 | *President's List*
Relevant Coursework: Data Structures & Algorithms, Database Management Systems, Object-Oriented Programming, Discrete Math, Calculus I, II & III, Linear Algebra, Computer Organization and Architecture, Operating System Administration I, Systems Fundamentals.

SKILLS AND INTERESTS

- **Programming Languages**: Python, Java, C#, SQL, T-SQL, JavaScript, Verilog, HTML/CSS
- **Techniques:** Database Management, Front-end & Back-end Development, User Research, Version Control, FPGAs, HDL
- **Technologies**: Git, Docker, Visual Studio, Visual Studio Code, Django, Microsoft .NET Entity Framework

RELEVANT EXPERIENCE

Guaranty Trust Co | *Software Engineering Intern* *May 2025 - Present*
- Developed robust applications and web applications utilizing Microsoft .NET Entity Framework.
- Gained comprehensive full-stack development expertise, integrating back-end frameworks (.NET Entity Framework), front-end technologies (HTML/CSS, JavaScript, React), and C#.
- Proficiently designed, implemented, and consumed RESTful APIs for CRUD operations, including integrating external web APIs.
- Created SQL databases using Entity Framework classes, and managed data persistence and retrieval using SQL databases.
- Adhered to business contracts and industry standards throughout the System Development Life Cycle (SDLC), including thorough testing processes.

McNeese State University | *Undergraduate Research Assistant* *January 2025 – May 2025*
- Developed and tested **digital circuit designs** using FPGAs for various applications, including basic LED blinker lights.
- Conducted in-depth research on the design, implementation, and optimization of FPGAs and **Verilog** HDL.
- Prepared detailed technical documentation and reports on research findings and project progress.
- Created prototypes of digital systems using FPGAs for experimental purposes and proof-of-concept studies.

McNeese State University | *Tutor & IT Assistant* *January 2025 - Present*
- Provided academic tutoring to students in Calculus I & II, Discrete Mathematics, and various Math and Computer Science courses.
- Assisted with student Academic Surveys, Feedback, and Implementation Programs.

PROJECTS

SkyRim | *Full-stack Development Project* | *C#, SQL, HTML/CSS, JavaScript, Microsoft .NET Entity Framework* *Project Link*
- Developed a full-stack online learning platform, using **Microsoft .NET Entity Framework** and following the MVC (Model-View-Controller) architectural pattern.
- Implemented core functionalities for student course enrollment, progress tracking, and an immersive user experience. Enabled instructors to upload learning materials, lesson videos, and resources for their designed courses.
- Integrated robust user authentication and authorization using .NET Identity and utilized an SQL database for efficient management of courses, users, materials, lessons, and other essential application data.
- Designed and consumed custom REST APIs, handling API requests, responses, and calls for comprehensive CRUD operations, alongside integrating existing API calls.
- Managed version control using Git and performed thorough debugging and testing throughout the development lifecycle.

NSBE Points System | *Python, Django, JavaScript, SQLite, HTML/CSS, React* *Project Link*
- Collaborated with a team of 4 to develop a full-stack Web application for allocating points to NSBE members based on user involvement and contribution to the organization. Visualized GitHub data is set up to show collaboration.
- Designed a dynamic events registration platform that utilizes user authentication modules, a ranking system, and various access to NSBE resources and links to enhance user experience and improve member involvement.

Traffic LED Light | *Research Project* | *Verilog* *Project Link*
- Developed a Verilog module named TrafficLED for clock frequency division. Defined input signals and an output signal.
- Implemented registers to count clock cycles on rising and falling edges, and designed registers to generate divided clock signals using bitwise operations and conditional expressions.
- Included detailed comments throughout the code to explain the functionality and purpose of each section.

LEADERSHIP & ACTIVITIES

- **National Society for Black Engineers (International Senator):** Part of the Executive Board tasked with augmenting, reviewing, and documenting NSBE National Bylaws, and changes made.