Ethan Kilpatrick

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OBJECTIVE

Passionate computer engineering student from Mississippi State University with 1 year of development experience with WinForms applications, full-stack web development and robotics. Seeking an entry-level position as a **software engineer**, leveraging my dynamic skillset and inquisitive nature to develop innovative software solutions utilizing my background in mathematics and knowledge of a wide variety of programming languages/frameworks.

Strengths:

- Thorough understanding of mathematics and statistics provides valuable insight into complex algorithmic problem-solving.
- Ability to tackle complex problems through collaboration with teammates demonstrated through my experience developing and debugging within an active production environment alongside a team of engineers.

EDUCATION

Bachelor of Science in Computer Engineering, Mississippi State University — Aug 2019 – May 2024

Minors in Mathematics and Global Engineering Leadership

GPA: 3.94/4.00

- Relevant Coursework: Data Structures, Discrete Structures, Algorithms, Microprocessors, Comp. Architecture, Data Communication Networks, Operating Systems (Linux), Digital System Design, Signals & Systems, Intro/Interm Programming.
- Minor Coursework: Project Management, Ethics in Computing, Challenges in Global Engineering Leadership, Graph Theory, Linear Algebra, Differential Equations, Calculus I-IV.
- Extracurriculars: Shakhouls Honors College, Dean's List, Club Ultimate Frisbee Captain

PROFESSIONAL EXPERIENCE

Computer Engineer Intern — May 2021 – Jan 2023

Siemens Energy, Richland, MS

- Digitalized inventory adjustment through the development of a full-stack web application. Front-end development with React and back-end with the Express framework of NodeJS along with Oracle database and SAP connectivity.
- Collaborated with software team to maintain and update factory management system to automate numerous activities around the facility including customer shipment notification, employee sign-in, inventory reconciliation, etc.
- Automated the creation of CAD drawings for an engraving system using Auto lisp, algorithmic nesting, SQL, and .NET 6, increasing the quality of customer nameplates by upwards of 50%.
- Updated communication protocol between client/server robotics application decreasing latency between commands by over 25%, whilst also receiving real time vector coordinates and safety data about the robots' operation.
- Implemented automatic calibration feature for robotics application using Cognex machine vision solution paired with programmatic calculations of waypoints using advanced vector mathematics.

PROJECTS

Guard Dawg (Freshman Design Project)

- Created a custom car alarm system as a freshman design project using an Arduino Uno, sound/motion sensors and an alarm.
- The product was awarded Best Design Project in the Electrical and Computer Engineering department in Spring 2020.

Basket Bully (Senior Design Project)

- Automatic basketball return system designed to decrease downtime between shots for practicing basketball players.
- Currently working with a team of 4 Electrical/Computer engineers to bring this product from the design phase to the development phase.

Cryptocurrency Trader

- Custom cryptocurrency trading application using the python-binance wrapper accompanied with algorithmic/mathematic analysis of bull/bear tendencies in different cryptocurrencies to determine ideal trading points for maximized profit.

SKILLS

Advanced (★★★★☆): C++, C, Python, .NET, Visual Basic, Object-Oriented Programming

Familiar (★★★☆☆): SQL, JavaScript, Java, ReactJS, NodeJS, HTML, CSS, Auto LISP