# **Alyssa Davidson**

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#### **EDUCATION**

Auburn University Auburn, AL

Bachelor of Science in Computer Science Cumulative GPA: 3.5 / 4.00

## **SKILLS**

• Programming Languages: Python, Java, C++, Ruby, SQL, JavaScript, CSS, HTML

- Web and Backend Frameworks: FastAPI, Bootstrap
- Al and Data Tools: PyTorch, Hugging Face Transformers, MiDaS
- Systems and Development Tools: Linux, Git, Bash, Assembly, CLI
- Software Design & Concepts: OOP, Data Structures & Algorithms, UML, Formal Languages, Secure Software Process
- Networking & Security: TCP/IP, NAT, Network Security Principles
- Certifications: SolidWorks Associate (CAD), TestOut PC Pro, C-Tech Copper/Fiber Cabling
- Productivity & Documentation: Microsoft Excel, PowerPoint, Word

#### **WORK EXPERIENCE**

## **Publix Market At The Shoppes At Cary Creek**

Auburn, AL

Customer Service Staff

April 2020 - Present

- Diligently handle transactions including POS, credit, cash, checks, and money service transactions to ensure the accuracy of orders
- Assist with onboarding and train over a dozen associates in accordance with company procedures and standards
- Manage cashiers' drawers, cash operations working with at least \$6,000 a day to identify and resolve cash discrepancies
- Coordinate as many as 25 associates during a shift to ensure the department is executing tasks with maximum efficiency

### **PROJECTS**

# SafeVision - Real-Time Depth and Object Detection System

Auburn, AL

Personal Project (In Progress)

May 2025 - Present

- Developing a real-time camera-based system to assist users with visual or spatial impairments
- Implemented object detection using Hugging Face's facebook/detr-resnet-50 and monocular depth estimation with MiDaS
- Integrated FastAPI backend to process image frames and return labeled objects with confidence scores and depth data
- Planned integration with a mobile-friendly web app to provide real-time navigation support through voice and visual feedback

## **Driver Safety System**

Auburn, AL

Team Member and Leader

August 2022 – December 2022

- Led a team of 5 in the development of a Driver Safety System using Python, managing brainstorming sessions, task delegation, and project timelines
- Developed a system that automatically adjusted seat and steering wheel positions for optimal airbag deployment based on collected data
- Designed a user-friendly GUI for easy interaction and system monitoring
- Ensured project completion within deadlines, maintaining high standards of quality and functionality

## O.G.R.E Robotics Team

Opelika, AL

Programming Member and Marketing Team Captain

August 2018 - May 2021

- Developed and implemented Java programs to support and enhance FRC competition requirements, ensuring high performance and reliability
- Updated and optimized previous years' code to align with evolving competition standards and new team goals
- Crafted clear, modular, and well-documented code to promote easy interpretation and future maintenance by team members
- Designed branded materials, including team buttons, shirts, and advertisements, to strengthen team identity and visibility