Zekarias Asaminew

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Education

Augustana College   Rock Island, IL
Bachelor of Arts - Computer Science, Biochemistry, Minor in Applied Mathematics   Feb 2022 - Dec 2026
- International Student Merit Award: $26,000 Dean's Scholarship Recipient

GPA: 3.908, Spring 2022 - Present Dean's List

South West Academy   Addis Ababa, ET
High School Diploma   Sep 2019 - Aug 2022
GPA: 4.000, Honors

Experience

Library Circulation & Research Help Worker   Aug 2023 - Present
Augustana College   Rock Island, IL
- Provided valuable research assistance to students, addressing their inquiries and facilitating a positive learning environment
- Improved library circulation efficiency through meticulous organization, ensuring smooth book transactions and maintaining accurate records

Calculus Researcher   Sep 2021 - Aug 2022
South West Academy   Addis Ababa, ET
- Calculated drug concentrations, and dosage rates for medical treatments, and predicted population growth and decay in biological systems
- Calculated time complexity for algorithms, conducted efficiency analysis, and analyzed signals and images through techniques like Fourier analysis

Tutor and Grader   Sep 2021 - Aug 2022
South West Academy   Addis Ababa, ET
- Simplified complex concepts in Math/Physics, evaluated Math/Physics worksheets

Projects

Road Lane Detection Algorithm
- Implemented a lane detection algorithm using OpenCV and NumPy, involving grayscale conversion, Gaussian Blur, Canny edge detection, and Hough Transform for accurate identification of lane boundaries
- Demonstrated the project's effectiveness through example usage on an input image, showcasing the ability to visualize detected lanes in real-world scenarios

2022 Democratic and Republican Vote Visualization Tool
- Performed in-depth data mining, organization, and analysis of 2022 Democratic/Republican vote data of all 52 states, focusing on gerrymandering detection and its impact on congressional seats
- Developed impactful GUI visualizations, including dynamic bar charts

Hunter and Prey: An Interactive Shooter Game
- Featured space key as the weapon of choice for precise shooting, and strategic mouse clicks to dictate the hunter's dynamic movements
- Compiled over 10 functions that execute unique tasks to alleviate process load and make the program efficient

Solitaire Symphony: Graphical User Interface Implementation
- Leveraged Object-Oriented Programming and data structures to employ multiple classes for move validation and encapsulation of game components

Technical Skills

Languages: Python, Java, HTML/CSS, JavaScript
Libraries: Requests, pandas, NumPy, matplotlib, Pygame, JUnit, Guava, OpenCV
Developer Tools: Thonny, Eclipse, VS Code, Colab, GitHub, Sublime Text
Additional: Google Workspace, Microsoft Office, Research