COLE ELLIS

✉ ellisnavy@icloud.com

github.com/thecae

linkedin.com/in/cole-ellis-2024

Education

Vanderbilt University | Nashville, TN

Bachelor of Science, Computer Science | Anticipated Graduation May 2024

- Overall GPA: 3.44 | Major GPA: 3.73
- Concentration in Artificial Intelligence
- Relevant Coursework:
    - *Software Design & Data Structures*
    - *Discrete Structures & Algorithms*
    - *Digital Systems & Circuits*
    - *Probability & Statistics*

Projects

Escape Room Building

Python, Assembly, SQL, HTML | Full Stack Development

- Created three fully functioning escape rooms currently in use
- Used Python for backend development to control game flow
- Used Arduino, Raspberry Pi, and Intel ALTERA DE10 circuits to control game mechanics, logic, and visual and special effects
- Used MySQL as DBMS for record management system
- Used HTML to build a front-end webpage for customer interaction
- Created easy-to-read code and easy front-end ways for administrators to modify gameplay and alter back-end processing

Minecraft Plugin Creation

Java | Object-Oriented Programming

- Implemented the Spigot API to build custom Minecraft plugins that supported in-game modification and minigame creation
- Used Bukkit and Spigot server creation to generate worlds and modify the functions of various Events to control game flow
- Used Heroku to host the server on the Cloud so it can run full-time
- Developed custom error messages for readable debugging and testing
- Wrote modular, scalable, and readable code for future development

Artificial Intelligence Virtual Assistant (A.I.V.A.)

Python | Machine Learning & Artificial Intelligence

- Currently developing a virtual assistant that utilizes artificial intelligence to self-learn how to answer questions and hold human-like conversations with a user
- Heavily relies on TensorFlow as the primary machine learning algorithms
- Wrote updatable software to soon be upgraded to have proprietary hardware

Experiences

Naval Reserve Officers Training Corps (NROTC)

Military | Leadership Development, Fleet Preparedness

- Currently serving as Platoon Commander, leading a group of ten individuals through all NROTC activities, including physical fitness and leadership trainings
- Former Academics Officer that managed all academic affairs; designed and implemented a tutoring initiative to provide free tutoring services to all students
- Ranked top-of-class in both physical fitness and academic performance

Apple Beta Software Development

Swift | Debugging, Testing, and Problem-Solving

- Tested unreleased Beta versions of Apple software for iOS, iPadOS, MacOS, and WatchOS to find bugs in any interactable part of the OS
- Worked alongside other software developers to design and implement solutions to problems found and submitted to Apple for implementation
- Current updates contain fixes my team has designed to former bugs

Languages

Spanish (Fluent)
Chinese (Elementary)
C++
Python
Java
SQL
LaTeX
C#
Swift
MATLAB
HTML
R

Software

Visual Studio Code
Jet Brains
MySQL
Amazon Web Services
Apple OS
Windows 10
Office Applications
Overleaf
React Native
XCode
Arduino
Intel Quartus

Frameworks

Discord API
Spigot API
BeautifulSoup
TensorFlow
Python Imaging Library
MetaPost
TikZ / PGFPlots
Numpy & Scipy
MatPlotLib
RESTful API

Interests

Cybersecurity
Artificial Intelligence
Machine Learning
Full-Stack Development
Neural Networks
Game Design
Web Scraping
Data Mining