Christian Sebastian Vargas

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EDUCATION

George Mason University   August 2023 – May 2027
Bachelor of Science in Computer Science (3.90/4.00 GPA)   *Fairfax, VA*
- Earned Dean's List honors every semester.
- **Relevant Coursework**: Low-Level Programming in C, Discrete Mathematics, Data Structures and Analysis of Algorithms in Java, Formal Methods and Models, Linear Algebra, Computer Systems and Programming in C, Probability and Statistics using R

TECHNICAL SKILLS

Languages: Java, HTML/CSS, JavaScript, Python, C, R
Frameworks/Libraries: NumPy, Pandas, scikit-learn, OpenAI API, Alexa Skills Kit (ASK), React, Node.js, Swing
Developer Tools: Git, GitHub, Unix/Linux, AWS Lambda, Visual Studio Code
Security: SHA-256, Advanced Encryption Standard (AES)
Other: 3D Printing, Computer-Aided Design (CAD)

SELECTED PROJECTS

Spotify Music Recommendation System | *Python, NumPy, Pandas, scikit-learn*   August 2025
- Built a music recommendation system coded in Python while employing machine learning techniques such as content-based filtering and cosine similarity to suggest songs from each user's favorites.
- Optimized for scalability and responsiveness, implementing a model that can efficiently generate recommendations for large datasets in real time.
- Created online documentation using clear, inline comments to explain source code logic and a README file detailing the project setup, usage instructions and methodology.
- Maintained a well-structured GitHub repository for version control, fostering ease of collaboration, reproducibility and future scalability.
- **GitHub**: https://github.com/christiansvargas/recommendation-system

Hackathon Project: Apollo AI | *OpenAI API, ASK, AWS Lambda, HTML/CSS/JS, React/Node*   October 2024
- **Award**: 1st place in the "Most Likely to Become a Startup" category at PatriotHacks
- On a 4-person team, built an end-to-end platform that integrates Azure OpenAI GPT-4o mini with Amazon Alexa for intelligent responses and accessible document summarization.
- Prototyped a 3D-printed Echo Dot casing in CAD; engineered AI prompt/response flows; implemented Git-based change management; integrated the Alexa Skill Management API with the OpenAI API.
- **Devpost/GitHub**: https://devpost.com/software/apollo-ai-eqvxh3

IB CS Internal Assessment: Password Manager | *Java, Swing, SHA-256, AES*   April 2023
- Built a desktop application that safely stores passwords to solve a client's problem of having to remember various login credentials, following the software development life cycle.
- Satisfied the client's security requirements by hashing and encrypting their login information using SHA-256 and AES; leveraged the Swing graphical user interface library to create a user-friendly experience; automated the opening of the browser for immediate website navigation and user login.
- Earned a score of 6 out of 7 on the internal assessment, leading to an overall IB score of 5 out of 7 in IB Computer Science HL, which evaluated to 6 college credits.
- **GitHub**: https://github.com/christiansvargas/password-manager

PROFESSIONAL EXPERIENCE

Undergraduate Teaching Assistant – Data Structures   January 2025 – June 2025
George Mason University   *Fairfax, VA*
- Provided academic support for undergraduate students taking Data Structures by answering questions and facilitating discussions on an online message board, escalating complex issues to professors when necessary.
- Assisted during office hours, offering one-on-one guidance and clarifying course concepts such as linked lists, trees and algorithm complexity.
- Proctored exams to ensure academic integrity and adherence to testing procedures; reviewed instructor drafts of programming assignments, and provided actionable feedback prior to work dissemination.