Jimmy Van Hout

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Rockville, MD

Education

University of Maryland, College Park, MD, *May 2022*

- **Bachelor of Science in Computer Science**
- Minor in Spanish Language, Culture, and Professional Contexts

Experience

Software Engineer

Consultant, *August 2025 - Present*

- Develop custom software applications, web applications, and websites for clients
- Work with clients to identify and solve an issue, gather requirements, obtain product feedback from stakeholders, and deliver a product according to clients' requirements
- Develop backend using Python, Flask, PostgreSQL, Amazon Cognito API; frontend using JavaScript, HTML, CSS, React
- Implement server-side user authentication and authorization, including the use of OAuth 2.0, Amazon Cognito, JWTs, and cryptographic libraries
- Develop HTTP REST APIs for programmatic access of data

Software Engineer

ScheduleAI, *June 2023 - August 2025*

- Developed a SaaS web application and artificial intelligence algorithm for automated employee scheduling
- Developed backend using Python, Flask, PostgreSQL, Amazon Cognito API; frontend using JavaScript, HTML, CSS
- Implemented server-side user authentication and authorization, including the use of OAuth 2.0, Amazon Cognito, JWTs, and cryptographic libraries

Skills

- **Working with clients to develop a product**
- **Programming Languages**: Python, JavaScript, C, Java
- **Web**: Python, Flask, JavaScript, HTML, CSS, React, Vue

- **Embedded**: ESP32, Arduino, Raspberry Pi
- **Cloud Computing/SaaS**: AWS (EC2, Cognito, Route53), GCP, Cloudflare, Azure, Stripe
- **Security**: Authentication and authorization, OAuth 2.0, JWTs, cryptographic libraries, NIST Secure Software Development Framework (SSDF)
- **Parallel and Multithreaded Programming**: HPC cluster at UMD (https://hpcc.umd.edu/hpcc/dt MPI, OpenMP, CUDA, Hatchet, Python `multiprocessing` module, Java `Thread` library
- **Databases**: PostgreSQL, SQLite
- **Version Control**: Git, GitHub
- **Operating Systems and Shells**: Linux (Debian, Ubuntu, Raspberry Pi OS), Mac, Bash

Selected Technical Projects

Parallelization of the Game of Life

C

Parallel implementation of the game of life using MPI.

Description: https://www.cs.umd.edu/class/fall2021/cmsc416/assignment1.shtml

Bioinformatics Algorithms Related to DNA Sequencing

Python

Implementation of various bioinformatics algorithms related to DNA sequencing including calculating minimum skew, the Knuth-Morris-Pratt algorithm, cyclopeptide sequencing, and global alignment.

Descriptions: https://rosalind.info/problems/list-view/