Justin Vallée

819-230-3859 ☏
valleejust8@gmail.com ✉
Justin Vallée 🔗

Security Clearance:
Reliability

CAREER OBJECTIVE

As a team-oriented computer science undergraduate, I aim to utilize my versatile programming skills and strong sense of logic to effectively meet demands. My goal is to simplify processes and enhance productivity through automation and innovative computer applications.

LANGUAGES
Bilingual:
French
English

TECHNICAL IT SKILLS

- Object-Oriented Programming (Java)
- Data Analysis and Manipulation (Python)
- Cloud-Based Applications (AWS)
- Web Development (HTML, CSS, JavaScript)
- Web Applications and Databases (PHP, SQL)
- UX/UI Design and Accessibility Assessment
- Low-Level Programming (C)
- Cybersecurity Principles
- Networking Concepts
- Adobe Creative Suite (Photoshop, Illustrator, etc.)
- Computer Hardware Installation, Configuration, and Troubleshooting
- Windows and macOS Operating Systems

WORK EXPERIENCE

AUGUST 2024 – PRESENT

Cybersecurity and Data Science Research Assistant /
University of Québec in Outaouais

- Python programming: Pandas, NumPy
- Data preprocessing, organization, and analysis
- Statistical analysis and application of tests
- Data visualization and plotting
- Big data manipulation
- Critical thinking, problem-solving, and pattern recognition
- Cybersecurity vulnerabilities, exposures, and patches

MAY 2019 – AUGUST 2024

Web Developer / Indigenous Services Canada (ISC)

- Coding of web pages in HTML and CSS
- Application of accessibility standards (WCAG)
- UX/UI testing of forms and web applications
- Web graphic design
- Development of intranet templates
- Production of web page inventory reports

Acting Team Lead and Senior Web Developer / ISC

- Management of client requests (bilingual service)
- Coordination and prioritization of workload
- Training and assistance for developers
- Advanced web layout support
- Client communication and handling of updates and queries
- Coordination with other teams for updates and information
- Monitoring team performance and providing feedback

Store maintenance and shopping cart management / Walmart

- Teamwork and autonomy
- Client service
- Adaptable, prioritizing tasks
- Multitasking
- Attention of surroundings
- Security and hazard training

EDUCATION

SEPTEMBER 2021 – AUGUST 2024
Bachelor's degree / University of Québec in Outaouais

- Computer Science Program

AUGUST 2018 – MAY 2021
College Diploma / Cégep de l'Outaouais

- Multimedia Integration Program

PROJECTS

Cybersecurity Vulnerability Analysis / Research Report Paper

Conducted a research project on cybersecurity and data science, analyzing the differences between exploited and non-exploited vulnerabilities using Common Vulnerabilities and Exposures (CVE) data from the National Vulnerability Database (NVD) for 2019 to 2021. The objective was to produce a scientific report addressing research questions such as identifying targeted companies and systems and understanding the types of attacks preferred by attackers. Analyzed the data, applying critical thinking to identify patterns and hypotheses, then used statistical tests to validate or invalidate the hypotheses. Utilized Python with Pandas, NumPy, and Matplotlib for data analysis and visualization.

Interest Rate Calculator / AWS API

Developed a simple REST API with a service-oriented architecture using AWS Lambda and API Gateway to calculate monthly mortgage payments. The application retrieves the central bank's interest rate in real-time, while allowing users to input a custom rate. It is hosted on AWS servers, with a front-end built using HTML, CSS, and Bootstrap.

Internship Management / Dynamic Web Application

Developed a web application for managing internships, allowing students to complete and submit forms, supervisors to track student progress, and employers to evaluate interns. User roles determine access, with data managed through a SQL database and PHP, incorporating security measures such as SQL injection prevention. The front-end is built using HTML, CSS, JavaScript, and Bootstrap.

Transport System Model / Java App (Front-end and Back-end)

Developed an application using Object-Oriented Programming to simulate a transport system within a defined world grid. The application allows users to input starting and destination points to generate optimal routes. It features an interface for modeling various transport options, including predefined modes such as cars, bikes, and public transport. The system estimates travel times by considering factors such as traffic conditions and transport routes.

Enigma Algorithm / Java App (Front-end and Back-end)

Developed an application simulating a variant of the Enigma machine, a World War II cryptographic system used for secure communications. The application implements a substitution cipher, where each letter in a message is replaced based on a specific key. It features an interactive interface for configuring encryption settings, including rotor positions and key inputs. The system allows for both encoding and decoding messages, providing a practical demonstration of the encryption principles used by the original Enigma machine.

Temperature Regulation System / Embedded System

Designed, implemented, and tested an embedded temperature regulation system using a microcontroller. It displays temperature on an LCD and activates LEDs and a fan when thresholds are exceeded.