

Ali El Achkar
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RESUME

Results-driven computer engineering professional experienced in all aspects of software development, from planning to testing and releasing, with a strong background in software development and product management. More than 2,5 years of experience in diverse projects, from web applications to VR learning modules with a focus on infrastructure and workflows. Graduated with honors in December 2021, excelling in multitasking and consistently making the dean's list. Fluent in four languages, I combine technical expertise, attention to detail, and a passion for innovation to deliver exceptional results. Recently returned from an enriching journey exploring Asia, I am now actively seeking my next opportunity in computer engineering to drive impactful solutions and contribute to cutting-edge projects.

EXPERIENCE

Software Developer, Product Manager

Nov 2021– Apr 2023

University of Ottawa, Faculty of Medicine, Department of Family Medicine

- Developed the whole stack of the Innovation Portal, a centralized platform hosting a diverse range of learning projects within the Department of Family Medicine.
- Led the development of 6 web applications that provided learning modules.
- Managed the development of 3 VR applications for the department, delivering immersive training experience for residents.
- Introduced and implemented agile processes to bring structure and efficiency to the development of the Innovation Portal.
- Provided feedback and guidance on the design of all the applications, ensuring user-friendly interfaces and optimal experiences.
- Developed and maintained a CRUD API that seamlessly communicates with the SQL Server database, ensuring efficient data management and retrieval.
- Mentored and oversaw a team of 15-20 interns, ensuring effective coordination and successful project execution.
- Contributed to the development of the CI/CD pipeline for multiple projects, enabling automated testing and deployment processes.
- Designed and released the cloud infrastructure to host and deploy the various projects that the department was working on.
- Utilized agile methodologies to efficiently manage project timelines, ensuring timely delivery of updates and enhancements to meet the department evolving needs.
- Acted as the technical point person for the hiring process, overseeing the selection and onboarding of interns and software developers.

Tools used: AWS, Azure, Docker, Node.js, Express, Cypress, SQL Server 2019, Auth0, GitLab, Github, Confluence, Jira, React, Nextjs, .NET Core 2.1, .NET 6.0, Firebase, Meta Quest 2.

Communication Projects Assistant, IT and Webmaster

May 2019 – Dec 2021

University of Ottawa, Faculty of Law, Common Law section

- Managed and facilitated the update and maintenance of the faculty's IT system, ensuring smooth operation and optimal functionality.
- Provided comprehensive IT support to faculty personnel and professors, troubleshooting hardware and software issues, and resolving technical problems promptly.
- Utilized Kace Management Support to efficiently manage and maintain all faculty devices, ensuring they were up to date and functioning properly.
- Updated and maintained the faculty website, ensuring accurate and timely information was reflected across all pages.
- Supported the publication of the faculty's monthly alumni newsletter and weekly newsletter to students, ensuring timely delivery of relevant updates and announcements.
- Employed tools such as Drupal, SQL, HTML, CSS, and JavaScript to enhance the functionality and design of the faculty website.
- Utilized Campaigner to manage email campaigns and ensure effective communication with the faculty's stakeholders.

- Leveraged Adobe Lightroom and Sony Vegas Pro for multimedia editing and content creation purposes.
- Assisted in coordinating and executing faculty events, contributing to successful event planning and seamless technical support.
- Worked closely with faculty members to understand their IT needs and provided customized solutions to enhance their productivity.

Tools used: Drupal, SQL, Kace, HTML, CSS, Javascript, Campaigner, Adobe Lightroom, Sony Vegas Pro, Office 365.

Product Development, Front-end Developer

May 2021 – Aug 2021

Mitel Networks

- Developed Web Components for multiple software applications within the Mitel Ecosystem, contributing to enhanced user experiences and functionality.
- Collaborated with development teams, working with both Angular and React apps to create new components and optimize development servers.
- Utilized the StencilJS framework to streamline testing and build processes for the library host, ensuring efficient code quality control and deployment.
- Employed Storybook to document UI components, providing a comprehensive reference for other developers and promoting consistent design implementation.
- Successfully migrated the testing framework from Protractor to Cypress after Protractor was no longer supported in Angular, improving testing efficiency and reliability.
- Designed and implemented end-to-end (E2E) and unit tests for Angular components, ensuring code integrity and preventing regressions.
- Utilized JavaScript, TypeScript, HTML, and SCSS to develop high-quality front-end solutions that met project requirements and industry best practices.
- Collaborated with cross-functional teams to gather requirements, discuss technical challenges, and implement effective solutions.
- Actively participated in code reviews, providing feedback and suggestions to ensure code quality and maintain best coding practices.
- Worked with version control systems like GitHub to manage and collaborate on code repositories, enabling effective code sharing and version management.

Tools used: JavaScript, TypeScript, HTML, SCSS, StencilJS, Storybook, React, Angular, Cypress, GitHub.

Teacher Assistant, Digital Systems I

Jan 2021 – May 2021

University of Ottawa, Faculty of Engineering

- Provided individual tutoring to students and addressed their questions during private office hours, offering personalized support to enhance their understanding of course material.
- Led laboratory sessions and assisted first-year students in grasping unfamiliar concepts and utilizing software tools such as Quartus II effectively.
- Offered constructive feedback to students on their reports and exams, aiding in their skill development and promoting academic success.
- Demonstrated proficiency in using Quartus II and facilitated students' understanding and utilization of the software for their engineering projects.
- Utilized the Brightspace learning management system to distribute course materials, provide updates, and facilitate communication with students.

Tools used: Quartus II, Brightspace.

Software Tester

Sep 2020 – Dec 2020

BlackBerry

- Actively participated in all aspects of the software testing process, collaborating with testers, developers, management, and project stakeholders.
- Designed and implemented manual test cases for BlackBerry Security Applications, ensuring comprehensive coverage and adherence to project specifications.
- Responsible for performing hands-on testing of new features and functions to ensure product functionality is working according to specifications.
- Analyzed and reproduced complex problems within test environments based on test results and customer-reported inquiries.

- Utilized tools such as IIS (Internet Information Services) and Windows Server 2012 to create and manage testing dashboards, facilitating efficient testing processes.
- Worked with Jira for issue tracking, managing and tracking defects throughout the testing lifecycle.
- Leveraged TestRail as a test case management tool to organize and track test cases and results.
- Collaborated with cross-functional teams to identify, document, and communicate software defects, ensuring clear and actionable bug reports.
- Provided timely and detailed feedback to development teams, contributing to the improvement of product quality and user experience.
- Actively contributed to team meetings and discussions, sharing insights and ideas to enhance testing strategies and processes.

Tools used: IIS, Windows Server 2012, Jira, Confluence, TestRail.

Localization QA Specialist

Jan 2020 – Apr 2020

OpenText

- Developed software tools to streamline and support future projects, enhancing efficiency and productivity.
- Conducted Quality Assurance (QA) activities, including testing and verification of localized products to ensure accuracy and adherence to localization standards.
- Maintained documentation and generated reports for various aspects of projects, providing clear and comprehensive documentation for future reference.
- Gained expertise in Localization QA methodologies, acquiring knowledge and skills to effectively test and verify localized software.
- Worked on scripting and parsing using Regex (Regular Expressions), automating processes and facilitating efficient data manipulation.
- Utilized programming languages such as Java and Python to develop software solutions, improving productivity and enhancing project outcomes.
- Leveraged tools like Secure Shell (SSH), Ruby, and SDL Passolo for localization and QA activities, facilitating efficient localization workflows.

Tools used: Java, Python, Secure Shell, Ruby, SDL Passolo

PROJECTS

CyberGlove

- Developed a glove using Raspberry Pi 4, Arduino Nano, and MPU 6050 to translate hand movements into American Sign Language (ASL).

Tools: Arduino, Raspberry Pi, MPU 6050, MQTT, Python, PCB Wiring, GitHub.

ServiceProvo

- Designed and developed an Android app that connects clients with services providers (e.g., plumbers, cooks, gardeners).

Tools: Android Studio, Java, XML, Firebase, SQL, GitHub

MeFIT Leaderboard

- Created an app that dynamically manages leaderboards for athletes in various competitions, with customizable ranking methods

Tools: PostgreSQL, Javascript, XML, HTML, CSS, GitHub

Real-time systems project

- Developed a subsystem to monitor and control energy levels from solar panels using an Arduino terminal.

Tools: C, Arduino, AM335x, CodeComposer, Doxygen, BitBucket

SKILLS

Software Development

- Proficient in multiple programming languages, including Java, Python, JavaScript, and C.
- Strong understanding of software development principles, practices, and methodologies.

- Experience with version control systems (Git, GitHub, Bitbucket) for collaborative software development.
- Familiarity with agile development processes and tools (Jira, Confluence) for efficient project management.
- Knowledge of software testing techniques and frameworks (JUnit, Selenium, Cypress) for quality assurance.
- Ability to design and implement scalable and maintainable code architectures.

Cloud Infrastructure

- Experience in designing, deploying, and managing cloud-based infrastructure using platforms such as AWS and Azure.
- Proficient in utilizing cloud services like Amazon EC2, S3, Lambda, and Azure VMs for scalable and reliable solutions.
- Familiarity with containerization technologies such as Docker and container orchestration with Kubernetes.
- Knowledge of serverless computing and the development of serverless applications.
- Understanding of cloud networking concepts, including VPC, subnets, load balancers, and security groups.
- Ability to configure and manage cloud databases, such as Amazon RDS and Azure SQL Database.
- Experience with infrastructure-as-code tools (Terraform, CloudFormation) for automating infrastructure provisioning and management.
- Knowledge of cloud monitoring and logging tools (CloudWatch, Azure Monitor) for performance optimization and troubleshooting.

Web Development

- Proficient in web development technologies such as HTML, CSS, and JavaScript.
- Experience with front-end frameworks like React and Angular for building interactive and responsive web applications.
- Knowledge of back-end development using Node.js, Express, and databases (SQL, PostgreSQL).
- Familiarity with web development tools and libraries (Webpack, Bootstrap) for streamlined development workflows.
- Understanding of RESTful APIs and web services integration.
- Ability to create visually appealing and user-friendly web interfaces.

Engineering

- Strong foundation in engineering principles and problem-solving skills.
- Experience in hardware programming and development using microcontrollers (Arduino) and embedded systems.
- Knowledge of electronic circuit design and PCB layout using tools like Eagle or KiCad.
- Familiarity with energy systems and renewable energy technologies.
- Understanding of real-time systems and control systems concepts.
- Ability to analyze and interpret technical specifications and documentation.

Communication

- Excellent verbal and written communication skills.
- Ability to effectively collaborate with cross-functional teams and stakeholders.
- Strong presentation and public speaking abilities.
- Experience in technical writing and documentation.
- Proficient in conveying complex technical concepts to both technical and non-technical audiences.
- Active listening skills and a customer-focused approach.

EDUCATION

University of Ottawa

Sep 2017 – Dec 2021

Ottawa, School of Electrical Engineering and Computer Science

- Bachelor of Applied Science in Computer Engineering, Cum Laude