

# Alfredo Castillo Jr.

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## Education

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### University of Illinois at Chicago (UIC)

*Bachelor of Science in Computer Science*

Graduated May 2014

Overall GPA: **3.25/4.0**

## Technical Skill Set

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**Web Development:** React, Next.js, Angular, NestJS, Spring Boot, Node.js, Express, NET Core, ASP.NET, Django, Nx, TailwindCSS, HTML5, CSS, LESS, SASS, Webpack

**Programming Languages:** TypeScript, JavaScript, Java, C#, C++, C, Objective C, Swift, Python, PHP, Kotlin

**Development Tools:** NgRx, Redux, Docker, Kafta, Redis, Helm, Harbor, JPA, Hibernate, Entity Framework, Mongoose, NET Core, Xcode, Eclipse, Git, GraphQL, Bootstrap, Angular Material, Material Design

**Database:** MySQL, SQL Server, PostgreSQL, MongoDB, SAP HANA, Tibco

**Other:** Kubernetes, OpenShift, AWS, Containers, Monorepos, MicroFrontEnds, Cypress, Playwright, Jest, Jasmine, Karma, Protractor, JUnit, Jira, TFS, Gitlab, Bitbucket, Slack, CI/CD Pipelines

## Work Experience

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### Lockheed Martin - Full Time Remote - Full Stack Engineer Staff

*March 2021 - Current*

#### NextJS & NestJS

- Architected and led the development of an NX monorepo-based system with a Next.js application and NestJS backend, following best practices and SOLID principles.
- Designed and implemented backend REST APIs for microservice communication, integrating MongoDB (Mongoose) and Kafka (kafkajs) for asynchronous messaging.
- Decoupled reusable modules and components into shared libraries, enabling rapid frontend and microservice development.
- Integrated two engineering teams within the monorepo, streamlining collaboration and code reuse.
- Implemented WebSockets (Socket.io) alongside REST services for real-time communication, using OAuth JWT authentication.
- Set up comprehensive unit testing with Jest to ensure high code quality and reliability.
- Designed and maintained GitLab CI/CD pipelines, automating deployments to OpenShift using Docker, Harbor (image registry), and Helm.
- Provisioned and managed the development environment on AWS EC2, optimizing performance and cost-efficiency.
- Established a Kafka schema registry to standardize message handling across services.
- Led version control and release processes using GitLab feature branches and merge requests (MRs).
- Created and maintained custom Helm charts, integrating third-party charts for Redis, MongoDB, and Kafka.

#### Angular & Spring Boot

- Developed and maintained an Angular frontend within an NX monorepo, ensuring modularity and scalability.
- Architected a microfrontend structure, allowing multiple teams to develop independently under a shared shell application.
- Built microservices using Spring Boot, integrating with MongoDB and SQL Server using Hibernate and JPA.
- Implemented Red Hat Process Automation to streamline business workflows.
- Integrated Apache Camel for service-to-service communication and process orchestration.

#### React & Spring Boot

- Led the re-architecture of a poorly written React application, introducing NX for enhanced development efficiency.
- Implemented Redux state management and custom hooks to decouple logic from components, improving maintainability and scalability.
- Refactored and enforced SOLID principles in the Spring Boot backend, improving performance and code quality.

**Lockheed Martin - Full Time Remote - Software Engineer Sr****January 2020 - March 2021**

- Development of Enterprise Contract applications. C# WinForm client, WCF middle tier and SQL Server.
- Create and manage TFS build and release pipelines for automatic build and releases.
- Support application maintenance and support tickets from all Lockheed sites.
- Lead the migration to adopting .Net Core api for future interfaces and future migration of WCF middle tier application.
- JIRA for agile/scrum task management tool

**Lockheed Martin - Fort Worth, TX - Software Engineer Sr****November 2018 - January 2020**

- C++ embedded software development and debugging for the F-35 multifunction displays on the Pilot Systems Software team.
- Experience using in house developed and COTS tools such as JASPER, JADE, Rhapsody, ADA Multi and Parasoft tool suites for full development life cycle.
- Experience in test driven development. Automated testing done with in house SWAT testing language.
- Used Serena Dimensions for configuration management and process documentations as well as TASER for requirements.
- Scrum Master and Team Lead of 7 developers.
- JIRA for agile/scrum task management tool

**Lockheed Martin - Fort Worth, TX - Software Engineer II****April 2015 - November 2018**

- Front End development using AngularJS framework for modularization of javascript code, while using modern web development workflow tools such as gulp, for building, test automation and deployment, NPM and Bower for modules and package management, as well Yeoman for generators, boilerplates and scaffolding of applications.
- Experience in database design, development and support of MS SQL Server as well as implementing business logic using triggers, functions, views and stored procedures while using tools such as SQL Server Management Studio.
- Backend development, design and deployment of ASP NET web api services using C# .NET object oriented Programming. Transferring of data using XML and JSON.
- Web UI design consisted of using tools such as Bootstrap, CSS, SASS and LESS as well as designing with Adobe Photoshop.
- Designed and developed the deployment of three iOS enterprise applications written in Objective C.
- Developed Windows Forms application in C# that communicated to an ASP.NET web service through AJAX and XML. Integrated third party vendor SDK to communicate and send data to external hardware.
- Participated and graduated from Full Stack Engineering Pipeline and gained experience creating a full CI/CD pipeline using AWS cloud.

**Lockheed Martin - Albuquerque, NM - Software Engineer****November 2014 – April 2015**

- Maintained and implemented features on software interacting with virtual simulation systems through TCP and UDP connections.
- Worked on in C++ and C# that heavily involved networking and interprocess communications between multi threads.
- Implemented features to software involving Django web framework while using Python and as well as the rest of the common web development languages. The software used RESTful web services with AJAX and XML to communicate with server.
- Mercurial control management tool for version control.

**Infinite Convergence Solutions - Arlington Heights, IL - Software Engineer****June 2014 – November 2014**

- Developed an enterprise messaging application that could be used from the desktop, web or iOS and Android mobile device. Gained experience working with web development languages such as HTML5, JavaScript and CSS.
- Developed and maintained server side scripting in PHP as well as MySQL relational database management system.
- Experience using RESTful web service using AJAX and JSON
- Used Apache Cordova API to build the mobile applications using web development tools. Worked with Apache Subversion as our version control system and Trac open source project as our issue tracking system.