

INTRODUCTION

- In 2010 I graduated from Engineering in Computer Technologies and received a full scholarship (CONACYT and Tec de Monterrey) to study a Master's Degree in Computer Science, that I finished later in May 2012. Both degrees were awarded by the 'Tec de Monterrey', Mexico City Campus.

EMPLOYMENT

Software Engineer	Ironclad	May 2025 – Present
--------------------------	-----------------	---------------------------

- Platform Infrastructure Team.

Senior Software Engineer	Onest	Sep 2024 – Apr 2025
---------------------------------	--------------	----------------------------

- Developed the back-end and front-end systems to support personal loans in underdeveloped markets, incorporating gamification and financial education to boost customer engagement.
- Developed microservices using TypeScript, Node.js, and Express.js while leveraging the AWS ecosystem—including Lambda (later migrated to Kubernetes), S3, DynamoDB, and Kafka. These services utilize an event-driven architecture for asynchronous communication alongside REST APIs for synchronous operations, significantly enhancing system scalability and resilience.
- Designed and built a back-office system from scratch using React with Redux, and RTK Query to improve performance.
- Developed a custom notification system that schedules timely alerts for payment due dates and overdue accounts, using DynamoDB to store a history of sent messages for audit purposes.
- Established CI/CD pipelines with GitHub Actions and implemented unit and integration tests to ensure that the services function correctly before automatically deploying them to development or production environments.

Senior Software Engineer	Nubank	May 2021 – Nov 2023
---------------------------------	---------------	----------------------------

- Built the screens and flow that customers use to apply for a personal loan in the Nu application; which resulted in the release of the first MVP for Mexico and the internationalization of the services architecture that worked both for Brazil and Colombia. Clojure, Datomic, BDC, and Flutter.
- Designed, and built the architecture that would enable the backend for the issue of personal loans; this includes the creation or internationalization of services. Clojure, Kafka, Datomic, and K8s.
- Built a solution in the fraud vertical that helped to decrease in 15% the time spent by customer service to process customers that could be identified as potential fraudsters. Clojure, ClojureScript, Kafka, Datomic, and K8s.

Senior Full Stack Engineer	Rappi	Jul 2019 – May 2021
-----------------------------------	--------------	----------------------------

- Coaching a small team to migrate the old microservices to a new event-based architecture mainly with Kotlin (Spring Boot) and Kafka, but we also used TypeScript (NestJS); that resulted in a more robust infrastructure that powers the Colombian's RappiPay B2B ecosystem. PostgreSQL, Jenkins, and K8s.
- Built a solution, with Airflow and Python3, that helped in the day-to-day settlement transactions processed by RappiPay systems with Rappi's debit card. This led to an automated process and a more precise and rapid resolution to tens of thousands of support tickets for Mexico and Brasil. Pandas, Snowflake, K8s.
- Developed new features in the RappiPay vertical, which helped to stabilize the functioning of the platform and make more attractive the use of Rappi's debit card. Node.js, JavaScript with Express/Koa, PostgreSQL, and K8s.

Software Engineer	AMK Technologies	Jun 2017 – Sep 2018
--------------------------	-------------------------	----------------------------

- Led the design and development of a high-demand API for registering users to entertainment subscriptions, this helped the company attract new clients. So clients could do their own advertisement of new products and subscribe users using the API. Spring (Core, JDBC), Dropwizard, HBase, Kafka, MySQL, MongoDB, Java 11, Maven, TDD, AngularJS, Angular 2+, React/Redux, and Docker.
- Standardized creation of the frontend projects. React, Redux.

Software Engineer	Indigo	Sep 2016 – Jun 2017
--------------------------	---------------	----------------------------

- Supervised the frontend codebase (AngularJS) for Bansefi back office, implementing and teaching best practices, clean code, and incremental refactoring. Bootstrap 3, Java, SQL Server, MyBatis, and WSO2 Application Server.
- Solved the need to process big CSV files of inventory for Bansefi, by implementing a batch process (Spring Batch) and printing PDF reports with Jasper Reports.
- Led the redesign and development of a “Flights and Hotel Reservation” Ruby on Rails project, that was staled for almost half a year, because there was no Ruby developer. So I had to organize meetings with the previous developer, and then do weekly meetings with the client to report advance and clarify doubts. Culminating in the successful end-to-end tests that implied third-party APIs. PostgreSQL, Redis, and NGINX.

Software Engineer	Glider Software Solutions	May 2012 – Sep 2016
--------------------------	----------------------------------	----------------------------

- Assisted in the redesign of the Citibanamex core system for opening new accounts, applying design patterns, TDD, and continuous refactoring. Resulting in a more maintainable and extensible codebase. Java, J2EE, Oracle Data Base, Oracle Weblogic, Oracle Business Process Management, Oracle Service Bus.
- Migration of the Citibanamex frontend system for opening new accounts, from FLEX to HTML (JavaScript/jQuery).
- Led the development of a new CIBanco project called “Multicurrency”, proposing the use of the Grails framework (Groovy). In the end, the project was successfully integrated with the internal REST services and help to achieve the deadline date.

Software Engineer, Intern	Yum! Restaurants International	Jun 2008 – Jan 2009
----------------------------------	---------------------------------------	----------------------------

- Reduced the missing toys between the provider and each franchise branch office by implementing a project that polled the quantity received from the provider, and sending a weekly email to the financial department with a report. Java, JSP, and Microsoft SQL Server.
- Implemented a custom survey for the financial department to post recommendations of new reports, resulting in new metrics that helped the financial team. HTML, JavaScript, and JSP.

EDUCATION

Mexico City	Tec de Monterrey	2005 – 2012
--------------------	-------------------------	--------------------

- **M.S Computer Science**, Apr 2012. Full scholarship by CONACYT and Tec de Monterrey.
- **B.S Computer Engineering**, May 2010. CENEVAL National Prize, Egress Test (EGEL).

OTHER PROJECTS

- **Intelligent Tutor System for the Training of Novice Operators of a Combined Cycle Power Plant** (2012). A web-based classroom where the professor designs tests for training operators, has a 3D model of the power plant, uses freesteam, an open-source library for the vapor tables, and grades the operators with the help of Bayesian Networks (Elvira tool). Java, C, MySQL.
- **Timbrao** (2017). Project that helps Mexican people to automatize their tax declarations by taking a photo to their receipts from some stores. PHP, JavaScript, Angular 2+, iOS.

LANGUAGES AND TECHNOLOGIES

- Engilsh (Professional working proficiency); Spanish (Native).
- TypeScript; Clojure; ClojureScript; Java; Kotlin; JavaScript; Python; SQL; NoSQL.
- Unit Tests; Integration Tests; TDD; Scrum; Agile; Microservices; CI/CD; Event-Based Architecture; REPL Driven Development.
- React/Redux; Node.js; Express.js; NestJS; Jest; Kafka; PostgreSQL; DynamoDB; AWS Ecosystem; Datomic; Pedestal; Leiningen; Maven; Gradle; Spring; HBase; AngularJS; Angular 2+; Git; Docker; Jenkins; AWS (IAM, ECS, S3); K8s.