

Harold Camacho

Software Engineer

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📁 Professional Experience

2025/03 – present
Remote, Canada

Open Source Developer

Mozilla - Firefox

- Collaborated with Mozilla engineers and core maintainers to analyze complex browser bugs, contribute production-grade patches, and participate in Firefox's review-driven, large-scale open source development process.
- Resolved multiple Picture-in-Picture (PiP) interaction issues on third-party sites by implementing domain-specific overrides and video wrappers to ensure smooth functionality.
- Refactored Firefox's PiP UI to align with Mozilla's Design System by replacing native HTML elements with custom reusable web components, updating Fluent localization strings, and debugging style and scripting conflicts—reducing reliance on overly specific CSS.
- Leveraged tools such as Mercurial, Bugzilla, Phabricator, and Searchfox to navigate Firefox's modular architecture, investigate issues, submit patches, and test changes across development builds.
- Authored a series of technical blog posts documenting my experience contributing to Firefox, breaking down complex bugs, debugging workflows, and insights from collaborating with Mozilla engineers.

2024/10 – present
Remote, Canada & U.S.

Creator, Software Engineer

Splinter splinter-app.github.io 🔗

- Developed Splinter, an open-source pipeline that simplifies ingesting and processing unstructured data for AI/ML workflows.
- Architected a scalable, ephemeral AWS-based infrastructure that activates compute resources solely during data ingestion, enabling the system to scale to zero when not in use, eliminating idle-cost overhead, and improving cost efficiency.
 - Implemented an event-driven system that ensures real-time updates to vector databases, where changes at the data source automatically trigger document addition, update, or removal in vector databases. Improving data freshness and accuracy in knowledge bases.
 - Optimized AWS Fargate performance by creating lightweight Docker images and refining resource allocations, boosting efficiency by 70% and reducing ingestion time for a 2.2 MB PDF from 3.5 minutes to 1 minute.
 - Integrated non-AWS document stores like Dropbox into the pipeline using DynamoDB, Lambda, and API Gateway, ensuring secure connectivity and a seamless user experience for document ingestion and management.
 - Built an Observability Dashboard using React, and AWS WebSocket API Gateway for real-time ingestion insights, powered by AWS Lambda and DynamoDB.
 - Developed a RAG Sandbox chatbot that validates ingested data by dynamically interacting with the database.
 - Authored comprehensive technical case study, readable at splinter-app.github.io/case-study 🔗

2024/05 – 2024/07
Remote, Canada & Mexico

Freelance, Software Engineer

Cibera

- Developed Recobra Crédito, a financial analysis tool to streamline credit, financial, and sales study processes for a Cibera client, improving analyst efficiency and decision-making speed.
- Implemented a robust backend using C#, ASP.NET 🔗 MVC, Entity Framework, and PostgreSQL, reducing data access complexity and improving maintainability.
 - Built comprehensive data models, DTOs, and controllers to support complex credit calculations and financial reporting, ensuring accurate insights for business stakeholders.
 - Designed and integrated PostgreSQL databases with Entity Framework, enabling efficient, stateful data tracking.
 - Developed React and Ant Design-based front-end components to create intuitive dashboards, improving user satisfaction and reducing training time.

2022 – present
Toronto, Canada

Software Engineer

Open Source Pojects

- RequestBin Clone: A web service that allows users to create custom endpoints to collect and inspect HTTP requests -- enabling the testing and debugging of APIs, webhooks, and other HTTP-based services. (Digital Ocean, Nginx, PostgreSQL, MongoDB, Node.js, Express, React)
- Simple Active Record ORM: Designed a Ruby-based ORM following Active Record principles for streamlined database interactions. (Ruby, PostgreSQL, PG)

🧠 Skills

Languages & Frameworks

Ruby, JavaScript, TypeScript, Python, Node.js, Express, Handlebars, Sinatra, React, ASP.NET 🔗, C#.

Cloud

AWS CDK, EC2, ECS, Lambda, S3, Batch, DynamoDB, API Gateway.

Other Technologies

PostgreSQL, MongoDB, Pinecone, Docker, Nginx, Digital Ocean, Git/Github, Mercurial, Phabricator, RESTful APIs, Linux, Bash, Trello.

Education

2021 – 2024

Software Engineering

Launch School [↗](#)

Multi-year, mastery based software engineering curriculum. Read more at launchschool.com/employers [↗](#)

2014 – 2019

Bachelor of Music BMus

Humber College, Toronto, ON

Certificates

- HuggingFace AI Agents Fundamentals (2025)