

Asim Shrestha

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TECHNICAL SKILLS

Languages: Python, Typescript, Rust, Kotlin, HTML, CSS, SQL

Libraries & frameworks: FastAPI, Next.js, React, OpenTelemetry, Protobuf, Terraform, Prisma, SQLAlchemy

Software & tools: AWS, Docker, PostgreSQL, MySQL, Kafka, Redis, Clickhouse, Firecracker, Grafana, RabbitMQ, Git

Other skills: System Design, CI/CD, OOP, Functional Programming, DevOps, Algorithms, Testing, Architecture

EXPERIENCE

Reworkd ([Website](#))

Mar. 2023 – Current

Co-founder & CEO

San Francisco, CA

- Raised \$4M from tier one investors like Y Combinator, Paul Graham, SV Angel, AI Grant, and more to build browser-based LLM agents.
- Launched one of the first available web agents in AgentGPT and scaled to 1M users, 35K stars on GitHub, and over \$1M in annual recurring revenue. ([GitHub](#))
- Architected arbitrary code execution service via Firecracker microVMs and AWS bare metal instances to sandbox and execute LLM generated code with millisecond latency overhead.
- Designed headless browser infrastructure using an L7 MiTM proxy sidecar to allow for sub second anti-bot evasion while handling 1TB+ of network traffic every week.
- Developed novel OCR based page parsing algorithm to convert webpage screenshots into whitespace-structured text to enhance LLM context. Took success rate in internal code generation benchmarks from 50% to 98%. ([GitHub](#))
- Created an AST-based post-processing system to automatically correct LLM-generated code by dynamically optimizing invalid selectors, overwriting hallucinated methods, and injecting missing syntax.

Amazon Web Services

Feb. 2022 – Mar. 2023

Software Development Engineer

Vancouver, BC

- Helped lead intra-org decoupling initiatives on the RDS Platform team to load manage/scale internal services and tighten security posture for RDS disaster scenarios.
- Engineered zero downtime major version upgrades (PG14 to PG17) for metadata stores powering RDS. Shed 10% in CPU utilization and up to 20ms in critical query latency across regions like us-east-1.
- Built ReCRUX in my spare time, a browser extension which added key features to our existing code review platform like persisting file view state, comment/file links, and other QOL improvements. Used internally by over 5K engineers.

BC Cancer Research Center

Jan. 2021 – Apr. 2021

Full Stack Engineer Intern

Vancouver, BC

- Open sourced RT-Utils, a Python library used to facilitate the creation of 3D medical image files from machine learning segmentation masks. Used by 100s of researchers from MIT, Waterloo, UCLA and more. ([GitHub](#), [Paper](#))
- Worked closely with Medical researchers to develop a medical data file anonymization and distribution application with extremely fine grained controls for anonymization configuration.

PROJECTS

Webboy ([GitHub](#))

Sept. 2025 – Nov. 2025

Gameboy emulator

- Cycle accurate Gameboy emulator built in rust with full emulation of the CPU, MMU, PPU, MBC, and more.

Bilby Compiler

Apr. 2021 – Aug. 2021

Custom programming language

- Custom programming language compiler built with Java, covering parsing, lexical analysis, semantic analysis, and intermediate code generation to support language features like arrays, conditionals, loops, and functions.

EDUCATION

Simon Fraser University

Sep. 2017 – Dec. 2021

Bachelor of Science in Computer Science

Vancouver, BC

- **Awards:** Graduated first class with distinction; President's and Dean's Honour roll.
- **CGPA:** 4.04/4.33 with academic performance in the top 5% in the school of computer science.