

# Aman Dureja

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## Skills

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**Languages:** Java / Ruby / C++ / Python / JavaScript / Go / Bash / SQL / OCaml

**Technologies:** Rails / Spring / MySQL / Kubernetes / Docker / Ansible / Puppet / Chef / Terraform / AWS

**Concepts:** Operating Systems / Concurrency / Scalable Web Architecture / Site Reliability Engineering

## Experience

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**Zynga** | Software Engineering Intern | Toronto, ON Summer 2018

- Increased CI throughput **50x** by containerizing projects with Docker and scheduling AWS EC2 spot instances
- Provisioned AWS infrastructure by writing **infrastructure as code** using Terraform, Packer, Puppet, and Chef
- Implemented Python scripts to backfill user analytics data in a **column-oriented DBMS** using Fluentd
- Architected a **service-oriented** in-app payments system with Java Spring in a SOX-compliant environment

**Shopify** | Software Developer Intern | Montréal, QC Fall 2017

- Upgraded core codebase to Ruby 2.4, reducing request latency by **300%** and operation costs by **\$1M+**
- Architected a **zero-downtime** Ruby version upgrade system using multiple clusters and parallel CI pipelines
- Implemented an automated Docker container build system in Go, resulting in **50%** faster builds and deploys
- Prepared sharded, distributed Ruby on Rails and MySQL infrastructure to handle **80K+** requests per minute

**TribalScale** | Software Engineering Intern | Toronto, ON Winter 2017

- Architected the NBA Alexa skill on AWS Lambda with NodeJS and MVC design, attracting **1000+** downloads
- Leveraged indexing and concurrency strategies to accelerate PostgreSQL database operations by **40%**
- Implemented a full-stack resource allocations tool with Ruby on Rails and ReactJS to manage **100K+** records

**Mappedin** | Software Developer Intern | Kitchener, ON Summer 2016

- Developed an automated blueprinting tool using OpenCV and **Canny Edge Detection** to simplify map import
- Reduced task repetition by implementing a map **templating** system using ReactJS, NodeJS, and MongoDB
- Architected a **distributed** CI and deployment pipeline using Jenkins and an in-house physical machine cluster

## Projects

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**ARM CPU Emulator** | OCaml, ARMv4T | amandureja.com/arm-cpu-emu

Software implementation of the ARM7TDMI processor; interprets the full ARMv4T instruction set.

**SockServe** | C++ | amandureja.com/sock-serve

A low-level, object-oriented HTTP server toolkit programmed using TCP sockets.

## Education

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**University of Waterloo**

2015 – 2020

**BSE** – Honour's Bachelor of Software Engineering