





# Aman Dureja

software developer

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## Experience

**Agile Software Engineer • TribalScale** Winter 2017 | Toronto, ON

*Amazon Alexa, Ruby on Rails, NodeJS, ReactJS, SQL*

- Developed an **Alexa** skill with **NodeJS** for the NBA playoffs; attracted **1000+** users
- Wrote a **JSON adapter** to model NBA API responses as custom data structures
- Applied **concurrency** strategies on a **Ruby on Rails API** to prevent data corruption
- Built a resource allocations tool using **ReactJS** to manage over **100K** records
- Leveraged **server-side rendering** and a **CDN** to accelerate Athos website by **25%**
- Designed custom CMS templates for **dynamic publishing** on Athos website

**Software Developer in Test • Mappedin** Summer 2016 | Kitchener, ON

*ReactJS, NodeJS, MongoDB, Jenkins CI, Sahi Pro*

- Built features for CMS and map design application, impacting over **37M** users
- Integrated automated **error tracking** into production map kiosk software
- Architected an **automated** testing and deployment pipeline using **Jenkins CI**
- Improved testing process efficiency by automating over **200 integration tests**

## Projects

**ARM CPU Emulator • OCaml, ARMv4T** [amandureja.com/arm-cpu-emu](https://amandureja.com/arm-cpu-emu)

Software implementation of an **ARM7TDMI processor** core that interprets the ARMv4T THUMB instruction set. Leverages **functional programming** in OCaml.

**SockServe • C++** [amandureja.com/sock-serve](https://amandureja.com/sock-serve)

A low-level, object-oriented server toolkit programmed using **TCP sockets**. Supports handling **HTTP** requests with callback functions.

**Side-Scroller Game • Java** [amandureja.com/side-scroller-game](https://amandureja.com/side-scroller-game)

A **multithreaded** side-scrolling game in which the player must collect items while avoiding obstacles. Programmed using **object-oriented design principles**.

**Alexandria • NodeJS, Firebase** [amandureja.com/alexandria](https://amandureja.com/alexandria)

A **server-side** application that serves snippets from a library of over **50,000** public-domain books. Developed at **Hack the North 2016**.

**GooseRun • C** [amandureja.com/goose-run](https://amandureja.com/goose-run)

An infinite side-scrolling, obstacle avoidance game for the Texas Instruments **Launchpad** microcontroller. Developed using the **Energia IDE**.

## Skills

### Languages

- C++
- C
- Java
- Python
- OCaml
- Ruby
- JavaScript
- SQL

### Technologies

- Git
- Amazon Alexa
- AWS
- NodeJS
- ReactJS
- Ruby on Rails
- CI (Jenkins, Circle)
- MongoDB
- CSS3

## Education

### University of Waterloo

**BSE - Honours Bachelor of Software Engineering**

2015 - 2020

## Interests

- Hackathons
- Project Euler
- Music
- Cooking
- Fitness