# ANSHUMAN PATNAIK

## 4th Year Student & Aspiring Software Engineer

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# **EXPERIENCE**

# Infrastructure Engineer

#### Wish (ContextLogic Inc.)

₩ Winter and Fall 2016

San Francisco, CA

- Established a framework to allow developers to easily denormalize collections through timed migrations
- Designed and built a framework to execute tools, commands and monitor the entire MongoDB cluster
- Created a tool to launch a production ready sharded MongoDB cluster in 5 mins using AWS, Chef and Python
- Architected and facilitated a migration moving a portion of existing database cluster to AWS, reducing main cluster load by 30%
- Validated, automated, and executed two major upgrades on the MongoDB cluster leveraging benchmarking tools and in-house orchestration tools, in conjunction with Chef
- Improved existing infrastructure monitoring tools through increased parallelization and higher fault tolerance
- Developed a log parsing tool to analyze database logs to detect bad queries ad hoc

### **Database Engineer**

#### **Rubicon Project**

**⊞** Summer 2015

**Q** Los Angeles, CA

- Maintained and optimized production MySQL database clusters through tasks such as query optimization, load balancing, and database backup automation
- Designed and built a dashboard using a Ruby-based framework to display critical system health and current task metrics

## **Research Assistant**

#### **University of Waterloo**

Winter 2015

Waterloo, ON

• Analyzed the short and long term stability of macroeconomic systems by comparing them to existing dynamic physics models

# **PROJECTS**

### **WaterBud**

- A proposed solution to curb household water waste by providing detailed breakdown of water use in a household
- Designed and built a MVP using Raspberry Pi, Tornado, Flask, and Python

### Monocle

• A real-time MongoDB cluster health visualizer built using d3.js and Flask built at a Wish Hackathon

# **SKILLS**

## **Progamming**

**BASH** Python Ruby C++MATLAB Git

#### **Databases**

MongoDB MySQL

#### Infrastructure

Chef AWS - EC2/S3/CloudFormation SaltStack OpenStack Networking

#### Web

Tornado | Flask Django HTML/CSS/Javascript jQuery

# **EDUCATION**

# **Systems Design Engineering**

#### **University of Waterloo**

Sept 2013 - Current

- Candidate for Bachelors of Applied Science - 2018 Expected
- Ranked 11 last 2 academic terms
- Cumulative average of 85.06

# **AWARDS**



#### **Dean's List Honors**

Awarded to top 10% of students in class based on academic merit, ranked 4th in Summer 2014



#### **Engineering Entrance Scholarship**

Awarded to students based on academic achievement



# President's Scholarship of Distinction

Awarded to Students with entrance average greater than 95%

# **INTERESTS**

Distributed Systems Economics Badminton Big Data