

# Colin Stuart

615-483-1134 • colindonstuart@gmail.com • colin-stuart.com

## EXPERIENCE

### **Rapid7, Boston, MA**

**July 2019 - Present**

#### *Software Engineer II*

*January 2021 - Present*

- Enhanced testing & validation for our in-house and community-developed Python plugins using Github Actions to ensure contributions all follow a standard format & include clear documentation

#### *Software Engineer I*

*July 2019 – December 2020*

- Designed, scoped, & built an interactive dashboard for our Support Engineers to quickly troubleshoot customer data issues using Golang, React, Terraform, Kubernetes & AWS
- Saved 435 hours of engineering time per year spent contacting AWS Support by automating part of the on-call process, requesting AWS Service Quota increases across 90+ production AWS accounts using Python, Terraform & AWS
- Automated Cassandra cluster repairs by deploying a Reaper using Terraform, Chef, Jenkins, Spinnaker, Linux, Postgresql, & Nginx, scheduled repairs for off-peak hours in each region to minimize impact on customers, ended the need to manually trigger cleanup on each node within a 200+ node cluster & set up a Cassandra staging environment to ensure future Cassandra upgrades are thoroughly tested & perform reliably without risking customer data loss
- Developed a new pipeline for enriching security alert data for customers, providing more context around malicious behavior at a glance using a series of Java Spring microservices & MySQL databases
- Responded to 24/7 on-call incidences from Pagerduty & Datadog, diagnosed issues in production instances using Bash & Linux, & debugged microservice errors logged in Kibana, & deployed new AWS infrastructure with Terraform

### **Iris Concise, Burlington, MA**

**November 2018 - May 2019**

#### *Junior Analyst*

- Increased IKEA sales by 7% from customers receiving personalized communications by developing a SAS model to segment IKEA customers using purchase & browsing data for targeted campaigns
- Demonstrated that IKEA shoppers who joined our loyalty program had a customer lifetime value 4x that of non-members by using SQL & SAS to analyze performance between email, direct mail, & loyalty program
- Created slide decks to present at IKEA's quarterly business review to show the impact of targeted campaigns

## EDUCATION

### **Boston University, Boston, MA**

**May 2018**

*Bachelor of Arts in Neuroscience, Minor in Computer Science*

## PROJECTS

### **Mapping Food Deserts in Boston**

**February 2018 - May 2018**

#### *CS591 Data Mechanics*

- Developed a Python-based API (RESTful Web Service) for an interactive web map of food availability and income across Boston neighborhoods using Flask, JavaScript, and a NoSQL database
- Aggregated Boston food and income data sets from multiple websites into a MongoDB database using a Python script
- Used k-means clustering to determine areas with and without easy access to grocery stores in Boston

### **Simulating a Swarm of Agents in Unity**

**February 2018 - May 2018**

#### *CS591 Cyber-Physical Systems*

- Created Unity simulations of a goal-seeking swarm of agents, controlled by either a TensorFlow convolutional neural network, a genetic algorithm, or a modified A\* search algorithm

### **Improving the Hater Dating App**

**October 2017 - December 2017**

#### *CS542 Machine Learning*

- Implemented both Naïve Bayes and SVM spam filters with 81% accuracy (improved from a 50% baseline accuracy) for messages sent through the app
- Created a matching algorithm that predicts whether two users will match with 61% accuracy (improved from a 30% baseline accuracy) by calculating similarity scores between two users and performing a logistic regression