

# SHAURYA MADAN

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## Education

### University of Waterloo

*Candidate, Bachelor of Applied Science, Computer Engineering*

**Sep. 2017 – Present**

*Waterloo, Ontario*

## Relevant Coursework

- Data Structures
- Algorithms
- Operating Systems
- Distributed Computing
- Computer Networks
- Computer Security
- Concurrency
- Databases

## Skills Summary

**Languages:** Python, JavaScript, Java, C/C++, SQL, HTML, CSS

**Tools/Frameworks:** Django, Spring Boot, React, Angular, Android, PostgreSQL, MySQL, AWS, Firebase, Docker

## Experience

### SS&C Technologies

**Jan. 2020 – May 2020, Sep. 2020 – Dec. 2020**

*Full Stack Developer*

*Toronto, Ontario*

- Designed and implemented the SS&C Knowledgebase database schema for reliability, document history preservation, and fast end-to-end full-text search functionality using PostgreSQL's tsvector tool
- Developed a REST API and UI with Spring Boot and Angular to implement a workflow process for creating, editing, and submitting recommendations for financial documents
- Implemented authentication and access control with the OAuth protocol for SS&C Blue Sky using Keycloak integrated with Active Directory for single sign-on
- Expanded system that enabled clients to interact with legacy COBOL programs via HTTPS and modern data interchange formats and authorization standards like JSON and JWT, improving developer efficiency

### Avenza Systems

**May 2019 – Aug. 2019**

*Python Developer*

*Toronto, Ontario*

- Developed an algorithm that would automatically populate test databases according to business logic, reducing time needed to write unit tests and allowing developers to focus on creating new features
- Created a program with the GDAL C++ library that would extract geographic metadata from maps and compute values such as area and resolution, which would be used for categorization and filtration of products in the database
- Enhanced a status monitoring tool that enabled admins to quickly perform root cause analysis during system outages
- Used Django to implement new features and fix bugs on the Avenza MapStore to improve user experience

### Open Text Corporation

**Sep. 2018 – Dec. 2018**

*Software Developer, Exstream Product*

*Waterloo, Ontario*

- Expanded OpenText's PyFT automation framework, improving the breadth and quality of regression tests that could be run on the Exstream product suite
- Wrote more than 200 new regression tests using PyFT to accelerate the rate at which new builds could be verified
- Improved existing tests to run 5 times faster while still maintaining a 100% success rate

### Evertz Microsystems

**Jan. 2018 – Apr. 2018**

*Product Verification Specialist*

*Burlington, Ontario*

- Developed a Python tool to create artificial latency in a network by delaying data packets sent to an ethernet port or IP address, used for performance testing and real-world simulations
- Tested for bugs and performance issues on current and upcoming builds of the Evertz DreamCatcher system

## Projects

### Remember This | *Python, Android, AWS, Docker*

- Developed an Android app that would record a user and determine if they had done something worth remembering
- Used S3, AWS Rekognition and Python's SpeechRecognition library for analysis, Lambda, and SNS

### Ultrasonic Sensor | *C, Texas Instruments Launchpad*

- Created an ultrasonic sensor using C and a TI Launchpad for cyclists to detect objects in front or behind them

### Coup Online | *Angular, Spring Boot, Simple Text Oriented Messaging Protocol*

- Online version of the card game coup, made with Angular and Spring Boot, and using STOMP to communicate