

Alan Karimullah

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Skills & Experience

- Proficient in Java (concurrency, lambda expressions, exceptions, Collections, Swing and AWT)
- Competent in C++, Linux environments, Bash, Python, Git
- Experience with Scrum, code reviews, writing documentation, giving presentations, tutoring students
- Experience with customer liaison: support work, calls, site visits, coordinating system maintenances

Education

Bachelor of Mathematics, Computer Science, University of Waterloo 2012/09 – 2018/04

- Minor in Combinatorics and Optimization, Minor in Computational Mathematics

Employment

Project Engineer Evertz Microsystems Ltd. 2018/09 – 2020/09

- Configured, upgraded, and maintained various parts of customer's end-to-end broadcast system
- Resolved five security vulnerabilities requiring configuration or new features:
 - explained requirements in detail to development teams, updated project manager on resolution timelines, deliberated with product lead about work and contract scope
 - work involved Linux sudoers, FTP server password requirement and corresponding updates of apps and scripts, configuration of HTTPS service with SSL termination on load balancer
- Tested and documented system support for new MPEG-DASH video proxy feature:
 - worked with development to allow further configuration to meet customer needs

Co-op Student Work Experience

Backend Engineer Urban Compass, Inc. 2017/05 – 2017/08

- Built Java and Python backend services using Thrift, gRPC and an HTTP-Thrift server
- Worked with Mobile team to proxy API requests via the HTTP-Thrift server to existing endpoints
- Created a week-long series of exercises, with 9 code labs, to help onboard new engineers quickly

Software Developer UXP Systems Inc. 2016/09 – 2016/12

- Automated the creation of Postman collections from the REST API to be used by any developer
- Created a Python script to publish Confluence pages with attachments via the Confluence REST API
- Improved a Bash script from 300 to 700 lines to automate most of the onboarding process

Java Developer Citigroup Inc. 2015/05 – 2015/08

- Pioneered the use of Graphite, a real-time metric monitoring tool, within the Rates division
- Wrote a wiki on deploying, configuring and using Graphite effectively, and gave a presentation

Java Developer Evertz Microsystems Ltd. 2014/09 – 2014/12

- Developed product JARs for VistalINK PRO – an SNMP monitoring and control software
- Created two major import/export features to save and share configuration settings in an XML file

Java Learning Assistant Sheridan College 2014/01 – 2014/04

- Prepared and lead tutorials, tutored students, and assisted faculty during in-class practice
- Voluntarily created a comprehensive reference program for students to learn Java concepts

Supplement Information

Projects

Mandelbrot/Julia set image generator (Java)

- Built the program with object-oriented design, multi-threading and extensive GUI features
- Interfaced the program with hand tracking and voice commands using an Xbox Kinect with a friend; our video demonstration is featured in OSPE's Nov. 2014 edition of *Student Notes*

2D Asteroid shooter (Turing)

- Included thruster particle effects and a feature to customize the ship design
- Designed the asteroids to break into smaller pieces and bounce off each other

Screenshots of 16 GUI programs are displayed on csclub.uwaterloo.ca/~a2karimu/

Tetris with a command-line interface and graphical display (C++, University project)

YouTube TEXTp imitation using 2D Fast Fourier transform and tries (Java)

Volunteer Experience

Operated a high school student help website 2011/08 – 2012/06
HelpSurge, helpsurge.com (discontinued)

- Co-initiated and co-administered a forum website for students at my high school to give and receive help for schoolwork in any subject
- Six students resolved their homework and lab questions by using HelpSurge
- Co-presented HelpSurge at a high school staff meeting to introduce it to teachers

Proofreader 2013/09 – 2015/04

Production staff at Imprint – the official student newspaper of the University of Waterloo

- Followed editing and commenting guidelines to point out errors and suggestions in draft articles

Floor assistant (120.75 hours) 2011/08 – 2011/09

Reuse Centre – Burlington Reuse Environmental Group

- Shelved and organized various items, and responded to customer inquiries
- Work effort led to the recondition of the board game and wicker basket sections

Math tutor (41 hours) 2011/09 – 2012/06

After-school Math Clinic – Robert Bateman High School

- Guided grades 9 through 11 students through their math homework