Ali **Niaki**

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Profile Summary

Dynamic and creative recent Computer Security graduate with over three years of experience in software development using Java, TypeScript, JavaScript and Python. Focused problem solver with superior analytical skills to identify problem roots. In previous roles, adopted new technologies and performed comprehensive research to complete projects. Enthusiastic about and experienced in application security, authentication, access control mechanisms, cryptography, network security and software architecture. Seeking to join Google's hardworking and collaborative professional software team to provide superior customer service and make a valued contribution to team members while developing and securing the next-generation computer technologies.

Education

B.Sc. Spec. Hons. Computer Security   *Sep. 2015 - Apr. 2020*

YORK UNIVERSITY   *North York, Ontario, CA*

- Member of Dean's Honour Roll (GPA of 7.38 out of 9).
- Granted membership of Golden Key International Honour Society.
- Achieved Chair's Honour Roll from the department of Mathematics and Statistics during the 2015-2016 session.

Work Experience

Computer Security Research Assistance   *Jan. 2020 - Aug. 2020*

YORK UNIVERSITY   *North York, Ontario, CA*

- Malwareless Web Analytics Pollution (MWAP) Tools Analysis
  - Multiple attacking tools and headless browsers analyzed.
  - Overall feasibility and effectiveness of conducting successful MWAP attacks evaluated where the attacker can generate a large number of fake requests from a single fully controlled machine.
  - New multithreaded MWAP attack tool developed (eLoki) in Java using HtmlUnit and Selenium to precisely assess Google Analytics and AWStats vulnerability to fake requests.
  - Currently (and until the end of August) developing software module for eLoki to record genuine human-user generated mouse movement and actions using Selenium WebDriver. Professor Natalia Vlajic will use final software against known bot-detecting tools, including Google Analytics and Google reCAPTCHA v3.

Co-founder & CTO   *Jun. 2019 - Current*

TREAD2GO INC.   *Richmond Hill, Ontario, CA*

- Architected and developed mini ERP RESTful API using Spring boot MVC, Spring Cloud and deployed on AWS Beanstalk.
  - Tread2Go monolithic backend was designed to schedule orders and allocate resources to optimize operations and minimize costs.
  - Software needed to be highly scalable and convertible to microservices.
  - To make the development process faster, integrated and used many third-party APIs (Firebase, Google Cloud APIs, Nexmo, Stripe and more).
  - Applied best practises and design patterns while designing and developing RBAC to handle authorization using Spring Security.
- Initiated Tread2Go Angular PWA and managed Angular front-end team using Trello, GitHub and Swagger; improved interpersonal skills to lead the project and soft skills to manage the stressful environment.
  - Repetitively converted business requirements to practical development plans, managed and executed development plans using the defined budget, enabled the company to continue working with lean and agile strategy.
- Deployed and maintained PWA and server-side services, orchestrated and managed DNS, Security Policies, S3, EC2, Beanstalk, RDS and SES.
  - Applied and setup DevOps and development pipelines using Amplify and GitHub, significantly eased PWA delivery.

Information Security Analyst   *Jan. 2019 - Apr. 2019*

SCOTIABANK   *Scarborough, Ontario, CA*

- Developed a robust cryptography tool specifically for the Information Security and Control department using Java without any framework to include the least number of external libraries as a security requirement.
  - Cryptool is compatible with most common OpenSSL standards and leverages from both Symmetric and Asymmetric cryptography.
  - Cryptool has different modes also to ensure data integrity via digital signature.
- Helped to analyze and test application security, including:
  - Static Application Security Testing (SAST) via Micro Focus Fortify and Blackduck.
  - Dynamic Application Security Testing (DAST) via Micro Focus Fortify Webinspect.
- Integrated some new security analysis and management software by learning and utilizing Python 3; helped the security team analyze and manage static source code vulnerabilities more efficiently.
  - Utilized Jira and Bitbucket and started to learn and adapt Jenkins to make the new application delivery process more efficient and robust.

Teaching Assistance

York University

- Assisted in the "Programming for Mobile Computing" course by helping students learn about Java 8 and Android Development, which significantly contributed to improving interpersonal skills.

Full Stack Developer

Jul. 2018 - Sep. 2018

Cube Angle Inc.

Markham, Ontario, CA

- Architected and developed Trade Dimension Dashboard (TDD) using Angular and Spring framework (REST API).
  - TDD was a Cloud-based web application mainly designed to visualize trade data stored on Amazon Redshift.
- Learned and utilized cloud computing concepts and various AWS tools to deploy Trade Dimension Dashboard, including:
  - AWS Cognito, Redshift, RDS and API Gateway and Ubuntu EC2 to make backend available.
  - "amplifyjs" and "awsmobile" to connect the frontend to AWS Cognito and Mobile Hub.

Web Application Developer

Apr. 2017 - May. 2018

Vaster Inc.

North York, Ontario, CA

- Learned and adapted Angular and Symfony (REST API) to develop Vaster Dashboard (VDP), was mainly designed to visualize Vaster Platform Data and support CRUD operations.
  - VDP was deployed on AWS CentOS EC2.
- Assisted in architecting and developing Cloud-based API of Novo Chat by learning and adapting Spring Boot and Spring Cloud and container technologies (Docker).
  - Implemented Discovery Service, Default Gateway, Configuration server and other microservices.
  - Microservices were deployed on multiple AWS Ubuntu EC2 instances.
- Learned and adapted the best security practices and tools:
  - JWT authentication had been used to authenticate VDP users (access token and refresh token).
  - Microservices were set to use JWT to talk to each other over a secure channel.

Skills & Concepts

Security	Cryptography, Network Security, JWT, Authentication, Spring Security
Programming	Java, TypeScript, PHP, JavaScript, Python, SQL, Eiffel, C, C++
Back-end	Spring, Spring Boot, Symphony, REST API, Microservices, Software Design, Algorithm Optimization
Front-end	PWA, Angular, jQuery, SCSS, HTML, CSS
DevOps	Docker, Kubernetes, Jenkins
AWS	Amplify, Cognito, BeansTalk, S3, EC2, ECS, RDS, SES, Route 53
Languages	English, Persian
Other	Unix/Linux Based OS, Concurrency, Multithreading and Synchronization, CMS, Autodesk Maya

Volunteer and Other Experience

In junior school, began to learn robotics and led the Danesh High School team for three years. Team achieved the first place in two local tournaments and an award in Iran Open Robo Cup 2012. Taught high school-level robotics for almost a year after leading team to success in the Robo Cup before moving to Canada. While in high school and university, taught Java and PHP to friends, and built websites using Drupal, WordPress and Joomla.

Participated in the Google Foobar challenge and shared contact information with Google (saaniaki@gmail.com).