

Ali Niaki

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Profile Summary

- Senior Full Stack Engineer at BrainFx, B.Sc. Hons. Computer Security at YorkU
- Enthusiastic about and experienced in software architecture, application security, cryptography and access control
- 4+ years of experience in developing REST APIs and web apps using Java, Spring Boot, TypeScript, JavaScript, NestJS and Angular

Skills & Concepts

Security	Cryptography, Authentication, JWT, NestJS Security, Spring Security, Network Security, OAuth2
Languages	Java, TypeScript, PHP, JavaScript, SQL, Python, Eiffel, C, SCSS, HTML, CSS
Concepts	Domain-Driven Design, Microservices, Software Architecture, Concurrency, Multithreading, Synchronization, Algorithm Optimization, Event-Driven Design, Websockets
Frameworks	NestJS, Spring, Symphony, Angular, VueJS, NuxtJS, Node.js, RabbitMQ, MongoDB, Drupal 7, WorkBox
Build Tools	Maven, Docker, Kubernetes, Jenkins
DevOps	Linux Server Ops, Amplify, Cognito, BeansTalk, S3, EC2, ECS, RDS, SES, Route 53

Education

B.Sc. Hons. Computer Science (Spec. Security)

YORK UNIVERSITY

Sep. 2015 - Apr. 2020

North York, Ontario, CA

- Member of Dean's Honour Roll (GPA of 7.38 out of 9)
- Achieved Chair's Honour Roll in Mathematics and Statistics

Sep. 2015 - Apr. 2016

Work Experience

BrainFx Inc.

SENIOR FULL STACK ENGINEER

Sep. 2020 - Current

(remote) Pickering, Ontario, CA

- Planned, developed and implemented security for end-user and server-to-server authentication and authorization:
 - Leveraged asymmetric cryptography to ensure data integrity.
 - Integrated with Drupal, NestJS and NuxtJS through architecting new custom native components.
 - Made server-to-server calls on behalf of end-users possible.
- Gathered requirements and planned to deprecate the existing legacy platforms and incrementally replacing them with an API built upon Drupal:
 - Refactored the legacy platforms' databases to support new features.
 - Updated the Drupal back-end and UI with new business requirements for the increased diversity of customers.
 - Designed and implemented the new subscription-based model and completed the pay-per-use removal.
- Architected and implemented a new sub-platform back-end application according to the DDD architectural pattern:
 - Initialized the RESTful and Websockets API, Data Access Layer (Repository Pattern for MongoDB), internal modules structures and their intercommunication patterns (asynchronous, event-driven).
 - Implemented the new sub-platform using NestJS, TypeScript, Mongoose.
- Implemented PWA Service Workers' update workflow via VueJS, NuxtJS and Workbox.

Computer Security Research Assistant

YORK UNIVERSITY

Jan. 2020 - Aug. 2020

North York, Ontario, CA

- Malwareless Web Analytics Pollution Tools Analysis and Development:
 - Evaluated overall feasibility and effectiveness of conducting successful malwareless attacks.
 - Developed new [multithreaded MWAP attack tool](#) ([github.com/saaniaki/eloki](#)) in [Java](#) and [Maven](#) using HtmlUnit and Selenium to precisely assess [Google Analytics](#) and [AWSStats](#) vulnerabilities to fake requests and successfully manipulate analytical data.
 - Developed a feature to bypass known bot-detecting tools ([Google reCAPTCHA v3](#)).

Co-founder & CTO

TREAD2GO INC.

Jun. 2019 - Jun. 2020

Richmond Hill, Ontario, CA

- [Architected](#) and developed a mini ERP [REST API](#) using [Spring Boot](#), [Spring Cloud](#) and deployed on [AWS](#) Beanstalk:
 - Highly [scalable](#) and convertible to [microservices](#).
 - Significantly [improved performance \(80%\)](#) by automatically scheduling orders, managing resources and optimizing operations.
 - Integrated and used various third-party APIs to make the development process faster (Firebase, Google Cloud APIs, Nexmo, Stripe and more).
 - Applied best practices and design patterns to develop RBAC 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 DNS, Security Policies, S3, EC2, Beanstalk, RDS and SES:
 - Applied and set up [DevOps](#) using Amplify and GitHub to [ease PWA delivery](#) significantly.

Information Security Analyst

SCOTIABANK

Jan. 2019 - Apr. 2019

Scarborough, Ontario, CA

- Developed a [robust cryptography](#) tool in Java without using any frameworks (security requirement) to include the least number of external libraries:
 - Compatible with [OpenSSL](#) standards; leverages from both [Symmetric](#) and [Asymmetric](#) cryptography; [digitally signs](#) documents.
- Analyzed application security (SAST & DAST) using Micro Focus Fortify, WebInspect and Blackduck.
- Integrated new security analysis and management software using [Python 3](#) to make analyzing static source code vulnerabilities [more efficient](#) and [automated](#):
 - Utilized Jira, Bitbucket and [Jenkins](#) to improve application delivery process.

Full Stack Developer

CUBEANGLE INC.

Jul. 2018 - Sep. 2018

Markham, Ontario, CA

- [Architected](#) and developed Trade Dimension Dashboard using [Angular](#) and [Spring Boot](#) frameworks ([REST API](#)):
 - [Cloud-based](#) web application to visualize trade data stored on [AWS](#) Redshift.
- Utilized cloud computing concepts and various [AWS](#) tools for deployment ([Cognito](#), [RDS](#), [API Gateway](#), [Ubuntu EC2](#), [Amplify](#)).

Web Application Developer

VASTER INC.

Apr. 2017 - May. 2018

North York, Ontario, CA

- Developed Vaster Dashboard using [Angular](#) and Symphony ([REST API](#)) to visualize data and support CRUD operations, deployed on CentOS EC2.
- [Architected](#) and developed [Cloud-based](#) API of Novo Chat by adapting [Spring Boot](#), [Spring Cloud](#) and [Docker](#):
 - Implemented Discovery Service, Default Gateway, Configuration server and other [microservices](#), deployed on multiple Ubuntu EC2 instances.
- Applied [best security practices](#) for authentication and [microservices](#) secure communication (JWT).