

# Ali Niaki

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- **Computer Science** at YorkU (graduated 2020) and **Co-founder** of Tread2Go ([tread2go.com](https://tread2go.com))
- Enthusiastic about and experienced in **software architecture**, **application security**, **cryptography**, **authentication**, **access control** and **DevOps**
- **Over three years** of experience in developing **REST APIs** using **Java** and **Spring Boot** and web applications using **Angular**, **TypeScript** and **JavaScript**

## Skills & Concepts

<b>Security</b>	Cryptography, Authentication, JWT, Spring Security, Network Security, OAuth2
<b>Languages</b>	Java, TypeScript, PHP, JavaScript, SQL, Python, Eiffel, C, C++, SCSS, HTML, CSS
<b>Concepts</b>	Microservices, Linux, Concurrency, Multithreading, Synchronization, Algorithm Optimization
<b>Frameworks</b>	Spring, Symphony, React.js, Angular, Node.js, RabbitMQ, jQuery (lib)
<b>Build Systems</b>	Maven, Docker, Kubernetes, Jenkins
<b>DevOps</b>	Amplify, Cognito, BeansTalk, S3, EC2, ECS, RDS, SES, Route 53

## Education

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

Sep. 2015 - Apr. 2020

YORK UNIVERSITY

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

### Computer Security Research Assistant

Jan. 2020 - Current

YORK UNIVERSITY

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](https://github.com/saaniaki/eloki)) in **Java** and **Maven** using HtmlUnit and Selenium to precisely assess **Google Analytics** and **AWStats** vulnerability to fake requests and successfully manipulate analytical data.
  - Developed feature to bypass known bot-detecting tools (**Google reCAPTCHA v3**).

### Co-founder & CTO

Jun. 2019 - Jun. 2020

TREAD2GO INC.

Richmond Hill, Ontario, CA

- **Architected** and developed 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 setup **DevOps** using Amplify and GitHub to **ease PWA delivery** significantly.

### Information Security Analyst

Jan. 2019 - Apr. 2019

SCOTIABANK

Scarborough, Ontario, CA

- Developed a **robust cryptography** tool in Java without any framework to include the least number of external libraries (security requirement).
  - Compatible with **OpenSSL** standards, leverages from both **Symmetric** and **Asymmetric** cryptography and **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

Jul. 2018 - Sep. 2018

CUBEANGLE INC.

Markham, Ontario, CA

- **Architected** and developed Trade Dimension Dashboard using **Angular** and **Spring Boot** framework (**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

Apr. 2017 - May. 2018

VASTER INC.

North York, Ontario, CA

- Developed Vaster Dashboard using **Angular** and **Symfony (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).