

MURAD AKHUNDOV

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EMPLOYMENT

Okta

Toronto, Canada

May 2021 - Present

Software Engineer II

- Designed novel solutions to combat telephony pumping fraud, including a purpose-built rate limiting system that incorporates heuristics and machine learning for dynamic rate limiting. (Java, Python, Redis, Snowflake)
- Implemented a new system for dispatching high volumes of emails. (Go, AWS SQS, Lambda)

Okta

Toronto, Canada

May - August 2020

Software Engineer (Internship)

- Developed enhancements to Okta's SMS and Call authentication factors. (Java)

Connected.io (Acquired by Thoughtworks)

Toronto, Canada

May - August 2019

Software Engineer (Internship)

- Developed an Augmented Reality prototyping/user testing tool with a web control panel (React) and an audio AR Android end-user app (Kotlin).
- Developed a build and deployment pipeline. (AWS EC2, S3, Go)

Manulife

Toronto, Canada

May - August 2018

Software Engineer (Internship)

- Developed a transpiler for query languages, which enabled a smooth transition to elasticsearch based alerting.
- Developed and deployed monitoring microservices. (Java, Spring)

University of Toronto

Toronto, Canada

January 2020 - April 2021

Teaching Assistant

- Data Structures and Analysis (*CSC263*) Winter 2021

- Principles of Programming Languages (*CSC324*) Fall 2020

- Mathematical Expression and Reasoning for Computer Science (*CSC165*) Winter 2020

PUBLICATIONS AND RESEARCH

Verification By Gambling on Program Slices

Conference Paper

International Symposium on Automated Technology for Verification and Analysis (ATVA'21)

Murad Akhundov, Federico Mora, Nick Feng, Vincent Hui, and Marsha Chechik

Annotative Software Product Line Analysis Using Variability-Aware Datalog

Journal Paper

IEEE Transactions on Software Engineering (TSE) March 2023 Issue

Ramy Shahin, Murad Akhundov, and Marsha Chechik

Expediting Verification of Assertions in Loops by Isolation

Student Competition (1st Place)

ACM SIGPLAN-SIGACT Symposium on Principles of Programming Languages (POPL'20)

Murad Akhundov (Advised by Marsha Chechik and Mentored by Federico Mora)

EDUCATION

University of Toronto

Toronto, Canada

September 2017 - May 2021

Honours Bachelors of Science with High Distinction

Computer Science, 3.76/4.0 CGPA

TECHNICAL SKILLS

- **General:** Backend Web, Program Analysis and Compilers, Software Verification, Full Stack Web, Microservices, Fraud and Abuse Mitigation, Software Reliability and Performance, Data Science
- **Languages:** Java, OCaml, Javascript, Python, Rust, SQL, Go, C, Typescript, Haskell
- **Backend and DB:** Spring (Java), Express + Node.js (Javascript), MySQL, Redis, MongoDB
- **Frontend:** React.js, Android (Kotlin/Java)
- **Data Science:** scikit-learn, numpy, pandas