

MURAD AKHUNDOV

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EMPLOYMENT

Okta **Toronto, Canada**
Software Engineer II *May 2021 - Present*

- 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**
Software Engineer (Internship) *May - August 2020*

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

Connected.io (Acquired by Thoughtworks) **Toronto, Canada**
Software Engineer (Internship) *May - August 2019*

- 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**
Software Engineer (Internship) *May - August 2018*

- 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**
Teaching Assistant *January 2020 - April 2021*

- 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**
Honours Bachelors of Science with High Distinction *September 2017 - May 2021*
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