

# Dmitriy Prokopchuk

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## EDUCATION

### University of Toronto

2021 – 2025 (Expected)

Honours BSc Co-op Computer Science | **4.0/4.0 GPA**

Toronto, ON

- Lester B. Pearson Scholarship - Merit Based | **Full-ride for 4 years**
- 2022 University of Toronto Excellence Award - Summer Research Fellowship | **\$7500**
- 2022 University of Toronto Scholar In-Course Award - Top 20 students entering second year | **\$1500**
- 2021-2023 University of Toronto Dean's List of Academic Excellence

## EXPERIENCE

### Undergraduate Research Assistant

Feb 2023 – Present

University of Toronto, Computational Social Science Lab

Toronto, ON

- Led the back-end architectural design and development for a Chess AI platform using **Python, FastAPI, MongoDB, Nginx, and Docker**.
- Developed critical **RESTful** back-end accounts, data collection, caching, game ingestion, and user statistics systems.
- Optimized use of **asynchronous parallel job queues** for processing **AI** analyses to improve API endpoint response times by **1000%+**, and refactored existing code to increase server stability and uptime by over **2x**.

### Software Developer Co-op

May 2023 – Aug 2023

Royal Bank of Canada

Toronto, ON

- Created secure data conversion, event notification, and search systems for payment transaction **REST microservices** using **Java, Springboot, Kafka, and Elasticsearch** under an **Agile** environment.
- Brought **OAuth2** security, token parsing and verification systems to an entirely new payments API layer, ensuring security for **10000+** daily high-volume B2B transactions.
- Implemented database-linked feature flags to repoint internal API calls in line with other teams' API downtime using **Togglz** and **MS SQL Server**, increasing uptime by **30%**.

### Undergraduate Research Assistant

Nov 2021 – May 2023

University of Toronto, Ontario Institute for Studies in Education

Toronto, ON

- Created **25+** web-scrapers using **Python, BeautifulSoup4, and Selenium** to aggregate a worldwide university metrics database resulting in a UTEA research award valued at **\$7500**.
- Engineered standalone **CSV and SQL databases** with flagging systems for data and scraping discrepancies in **1,000,000+** datapoints, allowing for streamlined research analysis.

### Software Engineer Co-op

Sep 2022 – Dec 2022

PointClickCare

Mississauga, ON

- Developed and unit-tested authentication, authorization, and DB **back-end** systems for **4** data processing pipeline **REST APIs** using **Java, Springboot, OAuth2, Kafka, and MS SQL Server** in an **Agile** environment.
- Enabled the deployment of multiple **microservices** to a **Jenkins** pipeline and set up integration with **Helm Charts** and multiple **Microsoft Azure** services through **Terraform** scripts, increasing deployment efficiency by **50%**.

## PROJECTS

### Full-Stack Music Visualizer | [Java](#), [Springboot](#), [ReactJS](#), [p5.js](#), [Docker](#), [Azure](#), [Netlify](#) | [GitHub](#)

- Developed a web-based music player that visualizes the audio frequency spectrum using **ReactJS** and **p5.js**.
- Implemented a **Java and Springboot REST API** for uploading and downloading files over **HTTP** protocols.
- **Dockerized** Springboot application and deployed using **Azure**. Deployed front-end using **Netlify**.

### Android Venue Booker | [Java](#), [Android Studio](#), [Firebase](#) | [GitHub](#)

- Created a **CRUD Android application** with **Java** for the creation and booking of venues and events.
- Implemented **NoSQL** data storage, asynchronous data updating, and authentication with the **Firebase API**.
- Acted as **Scrum Master** for a team of **5** members, using **Jira** and **Github** for collaboration.

### Hack the Valley 5 Hackathon | [Python](#), [OpenCV2](#), [MediaPipe](#) | [DevPost](#), [GitHub](#)

- Developed a **Python computer vision** program to allow for gesture-controlled presentations.
- Prioritized tasks in a fast-paced environment to learn and apply **OpenCV2** and **Google MediaPipe** computer vision technologies within a timeframe of **38 hours**.

## TECHNICAL SKILLS

**Languages & DBs:** Java, Python, C, MS SQL Server, SQLite, MongoDB, Elasticsearch, Bash, JavaScript, HTML, CSS

**Frameworks & Methodologies:** Springboot, Azure, ReactJS, FastAPI, Flask, Firebase, Selenium, Agile

**Tools:** Docker, Jenkins, Jira, Git ([GitHub](#), [Bitbucket](#)), Nginx, Terraform, Maven, Heroku, Netlify, OAuth2