

# 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 UofT Excellence Award - Summer Research Fellowship | **\$7500**
- 2022 UofT Scholar In-Course Award - Top 20 students entering second year | **\$1500**
- 2021-2023 UofT Dean's List of Academic Excellence

*Courses: Design & Analysis of Data Structures, Software Design, Intro to Databases & Web Applications*

## 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 **API** 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 data conversion, event production, and search systems for scalable payment transaction **REST API microservices** using **Java, Springboot, Microsoft Azure, 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 **Togglez 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-scrappers 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 multiple **Microsoft Azure** services using **Helm Charts and Terraform** scripts.

## 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 **Microsoft Azure and 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 high-stakes time-limited setting to learn and apply **OpenCV2** and **Google MediaPipe** libraries.

## 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