# **Dmitriy Prokopchuk**

### Education

#### **University of Toronto**

Sep 2021 – Jun 2025

Honours BSc Computer Science Co-op | **4.0/4.0 GPA** | Dean's List 2021-2024

Toronto, ON

- Lester B. Pearson Scholarship Full-ride | \$350,000+
- 2023 STAB57 Professor Nominee Outstanding achievement in STAB57: Introduction to Statistics
- 2022 UofT Excellence Award Summer Research Fellowship | \$7,500
- 2022 UofT Scholar In-Course Award Top 20 students entering second year | \$1,500

## Experience

#### **Software Engineer Intern**

May 2024 – Aug 2024

Toronto, ON

eBay

- Led the feature development of an error recovery queue for cache updates, ensuring data recovery and long-term consistency in a production cache serving **3+ billion daily read requests** for item and seller data (**40,000 TPS**).
- Developed Springboot and Spring Batch services in Java and Kotlin, utilizing Kafka event queues and NoSQL database operations to enable the recovery of a 15,000 TPS event processing system.
- $\bullet \ \ Implemented \textbf{Prometheus} \ and \ \textbf{Grafana} \ monitoring, adding \ observability \ and \ alerting \ for \ critical \ production \ systems.$
- Authored and presented an **architectural design document** in an architectural design review session, receiving approval for new modules and enhancements to existing high-traffic production systems.

#### **Undergraduate Research Assistant**

Feb 2023 - Aug 2024

University of Toronto, Computational Social Science Lab

Toronto, ON

- Led the back-end systems design and development for a Chess AI platform **API** for providing machine learning analyses using **Python, FastAPI, MongoDB, Nginx, Git, and Docker**.
- Developed critical **RESTful** back-end accounts, data collection, caching, game ingestion, and user statistics systems.
- Optimized **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

Roval Bank of Canada

Toronto, ON

- Created scalable cloud-native **REST API microservices** for payment transaction systems in an **Agile** team using **Java**, **Springboot**, **Microsoft Azure**, **Kafka**, **Elasticsearch**, **and Git**.
- Added **OAuth2** token parsing and verification to a new API layer, ensuring security for **10,000+** daily B2B transactions.
- Implemented database-linked feature flags to repoint internal API calls in line with other teams' API downtime using MS SQL Server and Togglz, 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 **\$7,500**.

#### **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 cloud ETL pipeline REST APIs using Java, Springboot, OAuth2, Kafka, and MS SQL Server in an Agile environment.
- $\bullet \ \ \text{Integrated microservices with } \textbf{\textit{Jenkins}} \ \texttt{CI/CD} \ \text{and multiple } \textbf{\textit{Azure}} \ \text{services using } \textbf{\textit{Helm Charts and Terraform}} \ \text{scripts}.$

# **Projects**

**Distributed Cloud Compute Framework** | *Java, Kubernetes, Docker, PostgreSQL, Kafka, Springboot* | GitHub

- Created a  $\boldsymbol{scalable}$  distributed computing framework tailored for the cloud.
- $\bullet \ \ Implemented\ processing\ for\ custom\ \textbf{Docker}\ based\ jobs\ with\ \textbf{Springboot},\ and\ asynchronous\ job-queues\ with\ \textbf{Kafka}.$
- Enabled horizontal scalability with **Kubernetes**, with real-time job tracking over a **PostgreSQL** Database.

Full-Stack Music Visualizer | Java, Springboot, ReactJS, p5.js, Docker, Azure, Netlify | GitHub

- Implemented a Java and Springboot REST API for uploading and downloading music over HTTP protocols.
- · Containerized Springboot application and deployed using Docker, Microsoft Azure, and Netlify.
- Developed a web-based music player that visualizes the audio frequency spectrum using **ReactJS and p5.js**.

# **Clubs & Volunteering**

## **Vice Lead Partnerships**

Feb 2024 – Present

Google Developer Student Clubs

Toronto, ON

• Organized the first iteration of the GenAI Genesis Hackathon for **250+** participants, in coordination with **6+** industry sponsors, **30** judges, and **15** mentors.

## **Technical Skills**

Languages & DBs:

Java, Python, Kotlin, MS SQL Server, PostgreSQL, MongoDB, Elasticsearch, JavaScript, HTML, CSS

Frameworks: Springboot, Azure, FastAPI, ReactJS, Flask, Firebase, Selenium, Agile

Tools: Docker, Kubernetes, Kafka, Jenkins, Jira, Git, Prometheus, Grafana, Nginx, Terraform, Maven, OAuth2