ROONEY JINGYUAN GAO

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Eligible to work in the U.S. and Canada

EDUCATION

Vanderbilt University	M.S. in Computer Science	05/2023
University of Toronto	Hon. B.S. in Computer Science (Upper-level GPA: 3.92)	06/2021

EXPERIENCE

LinkedIn (Ads Serving) – Software Engineer Intern   05 – 08/2022, Sunnyvale, CA

- Designed and developed a **distributed remote cache** for LinkedIn's **real-time bidding** system with **1 million peak QPS** using **Java**.

- Reduced the **end-to-end latency** for real-time creative rendering by ∼**40%** and improved the cache hit rate by **62% in production**, enabling **AI-powered** and **SLA-aware** features to serve higher-quality ads.

- Designed and developed a **generic Couchbase client**, memory-efficient **data transformer**, and **schemas** to be integrated with nearline data writers for event-based caching.

- Researched existing caching behaviors and spec-ed out a new **Couchbase** cluster, **collaborating with SREs**.

- Developed result-comparison routines to safe-guard **data correctness** in **production traffic** pre-migration.

University of Toronto – Research Assistant   01 – 04/2021, Toronto, ON

- Implemented the speech recognition module in a **React** app for academic English development.

Activision (Call of Duty) – Software Engineer Intern   05 – 08/2020, Toronto, ON

- Wrote scalable **distributed web services** in **Python** for major titles with **75+ million** players, deploying and troubleshooting in containerized live environments using **Docker**, **Kubernetes**, and **Jenkins**.

- Developed back-end switching with **Redis**, **Cassandra**, and future storages, reducing response time by **3-10X** in production and enabling a **50% increase** in millions of concurrent players.

- Developed APIs to send **cross-game push messages** with client authentication that is mission-critical to the new party invitation feature, collaborating with **C++** client code engineers.

- Created and executed client profilings in **massive load tests** and **capacity planning** for a major title launch.

- Shipped and debugged **C++** client code for **health-checking production environments**.

SKILLS & AWARD

Programming Languages: Java, Python, C, JavaScript

Technologies involved: Docker, Kubernetes, SQL, Pytorch, React, Flask, Jenkins, GCP

Terminal Live by Citadel, Toronto vs Waterloo: 4th place out of 50 teams.

PROJECTS

TweetyPipe – real-time data processor and sentiment monitor
- Technologies: **Python, Spark, Kafka, Flask, Google Compute Engine, Twitter API**

YourEvents – personalized local events recommendation
- Technologies: **Java, MySQL, Javascript, HTML/CSS, AWS EC2, Apache Tomcat, JMeter**