

Yoav Arbiv

🌐 yoavarbiv.com | ✉ yoav.arbiv@gmail.com | **in** [linkedin.com/in/yarbiv](https://www.linkedin.com/in/yarbiv) | ☎ +1 (415) 832-9511

Technical Skills

Languages: Go, Python, SQL, C, C++, TypeScript, JavaScript, Rust, Verilog
Technologies: MySQL, Redis, Kafka, Thrift, Elasticsearch, WebSocket, MongoDB
Frameworks & Libraries: React, Node.js, Django, Flask, pandas, NumPy, Matplotlib
Tools: Kibana, Grafana, Git, Postman, Unix, FlameGraph, Docker

Experience

ByteDance

July 2022 – Present

Software Engineer 2-1

San Jose, CA

- Owned the end-to-end TikTok Live quality monitoring and mitigation flow, which automatically detects and mitigates hundreds of incidents monthly and **improves stability for millions of users globally**
- Developed automated CDN capacity scheduling for TikTok Live to redistribute delivery CDN node traffic and adaptively throttle bitrate, increasing **effective peak traffic capacity by up to 50%**
- Architected and delivered a cost-optimizing CDN scheduling system, which **reduces monthly CDN billing by up to 18%**, saving tens of thousands of dollars to date
- Delivered incremental optimizations to disaster mitigation systems to **reduce automated MTTR by >30min**
- Re-architected the stability platform to unify cross-data-center administration and increase efficiency
- Collaborated directly with **cross-functional teams** to prioritize and deliver urgent feature requests
- Drove several critical governmental compliance projects requiring extensive refactors
- Delivered high-quality oncall support for **>10 TikTok Live services**

Intel

Jan 2021 – Apr 2021, Sept 2021 – Dec 2021

SoC Design Engineer

Toronto, ON

- Modelled Intel memory controller IP using SystemC to **enable rapid microarchitectural iteration**
- Designed an algorithm to optimize individual silicon voltages, **improving power & delay metrics by up to 15%**
- Developed an internal tool to tune SoC voltages and evaluate cost functions for FPGA binning

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Jan 2020 – Apr 2020

Backend Engineer

Vancouver, BC

- Re-architected WebSocket use, improving response time and **decreasing worst-case API load by 66%**
- Profiled and load-tested critical endpoints using FlameGraph and Locust, **optimizing by >100ms**
- Developed a data aggregation job to produce automated reports on key metrics (revenue, DAU, etc.)
- Automated in-game shop events to reduce developer maintenance hours on legacy titles

D2L

May 2019 – Aug 2019

Fullstack Engineer

Toronto, ON

- Delivered an e-learning platform MVP to view and annotate coursework using React, Express, and Flask
- Developed an NLP tool to generate questions from course material

Google (formerly North)

Sept 2018 – Dec 2018

Software Engineer

Kitchener, ON

- Developed features and resolved critical bugs for an Android-based smart glasses platform

Projects

RISC-V CPU Emulator | *Python, Verilog*

- Designed a single-core pipelined CPU which implements the RISC-V ISA in Verilog
- Developed a Python testbench using binaries to verify functionality by checking simulated memory

Education

University of Waterloo

BASc, Honours Computer Engineering

Waterloo, ON

Sept 2017 – April 2022