# Yoav Arbiv

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## Technical Skills

**Languages**: Go, Python, SQL, C, C++, TypeScript, JavaScript, Rust, Verilog, SystemC
**Technologies**: MySQL, Thrift, Redis, Kafka, 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* *San Jose, CA*

- Developed and maintained features for a platform to manage and prevent TikTok LIVE incidents, **improving stability for millions of users globally** and reducing technical support engineer manhours
- Designed and built a service to detect capacity issues at video CDN nodes and redistribute user traffic, **increasing effective viewership capacity by up to 15%** at peak hours
- Implemented systems to **automatically detect CDN QoS drops** and reschedule traffic to nodes with better performance, **mitigating 50+ incidents within minutes** to date
- Re-architected the cross-data-centre LIVE alarm and response system to improve performance and UX
- Owned and drove several critical governmental compliance projects requiring extensive refactors
- Led a scrum with **three other developers over four quarters** to prioritize team workload
- Provided **oncall support for 10 TikTok LIVE services**, identifying and resolving long-standing bugs

**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

**A Thinking Ape** 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 – Apr 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** Waterloo, ON
*BASc, Honours Computer Engineering* *Sept 2017 – April 2022*