Jachym Putta

jachym.putta@yale.edu | jachymputta.github.io | linkedin.com/in/jachymp

EDUCATION

YALE UNIVERSITY, New Haven | AUG 2023 - CURRENT
Doctor of Philosophy (**PhD**) in Computer Science
Advisor: Prof. Anurag Khandelwal

YALE-NUS COLLEGE, Singapore | AUG 2018 - DEC 2022
Bachelor of Science (Honors) in Computer Science
Major GPA: 3.8 / 4

UNIVERSITY OF OXFORD, Oxford | OCT 2022 - DEC 2022
Visiting Student (Math and Computer Science), Oriel College

RESEARCH

ML-PERF
Characterizing and estimating the performance of ML models (Advisor: Prof. Anurag Khandelwal)

- Instrumented various large **machine learning** models, created a performance estimation model to evaluate different hardware scaling strategies to support growing model sizes to overcome the memory wall

SPIRIT
Distributed Resource Allocation (Advisor: Prof. Anurag Khandelwal)

- Set up a test bed in **Rust** emulating a multi-tenant environment with custom hardware resource distributions

WORK EXPERIENCE

SOFTWARE ENGINEERING INTERN | MAY 2023 – AUG 2023
CDN77, Prague

- Helped build and optimize the **video streaming stack**
- Finalized a **caching system** on outer network layers allowing for more efficient stream multiplexing
- Assisted in the design of the **network topology**

RESEARCH ASSISTANT - ML | JAN 2023 – JUN 2023
Yale-NUS College, Singapore (Advisor: Prof. Bruno Bodin)

- Designed and evaluated different **machine learning models** for finding liveness in cyclic SDF graphs
- Created a **dataset generator** for SDF graphs
- Wrote a **test suite** for Kiter increasing code coverage by **20%**

RESEARCH ASSISTANT - SYSTEMS | MAY 2022 – JAN 2023
Yale University, Department of Computer Science, New Haven (Advisor: Prof. Anurag Khandelwal)

- **Profiling and evaluation** of the programmable network switch code, identifying performance bottlenecks
- Implemented **batching** into the existing codebase, resulting in up to **12x speedups**
- Introduced an internal **test suite** and **documentation**

BLOCKCHAIN INTERN | DEC 2021 – MAR 2022
Zilliqa, Singapore

- Contributed to Scilla-chick, tool used for **property-based testing** of the Scilla **compiler** based on Quick-Chick
- Extended the Scilla syntax used for program generation

SOFTWARE ENGINEERING INTERN | APR 2021 – AUG 2021
Upskills, Singapore

- **Dockerized** and deployed a licensing server as part of a team of three interns handling licenses for all products
- Built back-end infrastructure for webapps in **Python** using **Flask**
- Performed unit and API testing and verification of frontend applications utilizing **Typescript** and **Postman**

OPEN SOURCE

- Burn – Deep learning framework in **Rust**, extended the **ONNX** integration
- Detypstify – OCR with Web assembly in Rust for the **typst** typesetting language
- Dotfiles – Complete personal development environment written in **Nix**
- Chorey – Created a time management app called in **Kotlin**

CERTIFICATIONS

- The Linux Foundation:
  - **LFS101x:** Introduction to Linux certificate
  - **LFS151x:** Introduction to Cloud Infrastructure Technologies
- UC Berkeley: **CS1981x**: Bitcoin and Cryptocurrencies