

ABEL YAGUBYAN

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SUMMARY

International graduate holding a Master's degree (F-1 OPT), with a background in Computer Science and Mathematics. My expertise lies in AI, ML, Software Systems, and Distributed Systems. I bring valuable experience in Deep Learning, NLP, Infrastructure Development, Distributed Systems, Cloud Computing, Computer Architecture, Security, Algorithms, and Low-level Software Development.

EDUCATION

University of California, Berkeley: B.A. Computer Science, B.A. Applied Mathematics **August 2018 - May 2022**

Relevant Coursework: AI, ML, Computer Vision, Computer Security, Computer Architecture, Parallel Computers, Database Systems, Operating Systems, Data Structures, Algorithms, Stochastic Optimization, Discrete probability, Advanced Linear Algebra

Northwestern University: M.S. Computer Science **September 2022 - June 2023**

Relevant Coursework: Deep Learning, Deep Learning in NLP, Deep Reinforcement Learning, Low-level/Kernel Software Development, Advanced Networking, Embedded Systems, CUDA Programming

TECHNICAL SKILLS

- **Programming:** C++, C, Python, Java, Golang, Rust, PHP, Javascript, CUDA, SQL, MATLAB, R
- **Technologies:** PyTorch, Tensorflow, XGBoost, MPI, UPC++, SHMEM, MongoDB, Firebase, MySQL, Bash, Kubernetes, Docker, AWS, Google Cloud, Heroku, Node.js, React, Django, Flask, RISC-V, x86

RESEARCH/WORK EXPERIENCE

Lawrence Berkeley National Laboratory: Pagoda Project Group

Research Contributor

June 2022 - April 2023

- Developed and deployed an automated performance regression testing platform for UPC++, a C++ library for writing efficient and scalable parallel programs on distributed-memory parallel computers, using C++, UPC++, Python, and Shell scripts.
- Implemented distributed hashing algorithm benchmark in UPC++ and compared performance against other available parallel-programming libraries, such as MPI and SHMEM.
- Documented usage of HPCToolkit, an integrated suite of tools for measurement and analysis of program performance, for lab staff utilization purposes on the high-performance computers available at LBNL.

Apple x UC Berkeley

Software Engineering Intern

May 2021 - August 2021

- Project lead in collaboration with Apple and UC Berkeley's CS61C: Computer Architecture course.
- Coded and managed for Computer Architecture, Algorithm, and ML-based projects to 4000+ students simultaneously.
- Using C, C++, Python, SIMD, OpenMP, and RISC-V Assembly.

PROJECTS

FibonAI

Co-founder, AI & Software Engineer

June 2023 - December 2023

- Designed and wrote source code for a SaaS platform, providing a comprehensive LLM-powered workspace for in-house corporate legal teams, integrating tools for intake & triage, contract management, matter management, and AI Assistants.
- Successfully onboarded 8 General Counsels/Chief Legal Officers at large in-house corporate legal departments. Achieved organic acquisition of 2 more customers to the waitlist.
- Demonstrated 60% conversion rate during product demonstrations and achieved 100% weekly user growth rate.
- Using Python, Flask, JS, React, Node.js, AWS, GCP, SQL, DynamoDB, LLaMA, GPT.

SCALPEL

Project Lead & Software Engineer

January 2022 - June 2022

- Using Python and modern compression techniques, customized Deep Neural Networks to underlying architecture running the model by optimizing usage based on level of hardware parallelism (i.e. CPU, GPU, Microcontroller, etc.).
- Reduced popular model (i.e. AlexNet, LeNet-5, etc.) sizes by up to 80% and achieved speedups up to 3.5x.

Fibonia

Co-founder & Software Engineer

May 2019 - June 2021

- Designed and wrote source code for a scalable web & iOS platform, providing a curated news feed from reliable sources.
- Used Google Cloud's Firebase and MongoDB to securely store and process user information, while using Flask-based API system with fine-tuned XLNet model for optimal news feed retrieval accustomed to customer's needs.
- Gained over 200 customers from platform and averaged over 100 monthly users.
- Using Python, PHP, Swift, Flask, Javascript, Selenium, Node.js.

HONORS & PUBLICATIONS

- Summa Cum Laude Honors at Northwestern University
- **Yagubyan, A.;** Garcia, D. *Embedding of Programming IDEs into Computer-Based Testing Software* (ACM SIGCSE, March 2022)