

AKSHAY SHARMA

+1 646-371-6198 · akshay.s@columbia.edu · [linkedin.com/akshay326](https://www.linkedin.com/akshay326) · akshay326.github.io

EDUCATION

Columbia University

New York, NY

MS in Computer Science, Machine Learning Track

Expected Dec 2022

Courses: Deep Reinforcement Learning, Adv. Spoken Language Processing, Computer Vision

Indian Institute of Technology

Varanasi, IN

Dual Degree in Mathematics and Computing, CPI: 9/10

May 2021

Courses: Natural Language Processing, Optimization Techniques, Digital Image Processing

WORK EXPERIENCE

Rejoy Health

New York, NY

Product Manager, Mobile App Team

Aug 2020 - Aug 2021

- Improved product by building a cross-platform Flutter app and adding desktop support.
- Devised new microservices-based backend on AWS, using dockerized computer vision models.
- Launched two major features in six months; ~30% MoM growth in user engagement.

Goldman Sachs

Bengaluru, IN

Summer Analyst, Global Asset Management Division

May 2020 - Jun 2020

- Developed a scalable, micro-services health check server using GraphQL and Apache Kafka.
- Created an internal platform to stream garnered analytics using React.JS and Spring Boot.

Adobe

Noida, IN

Product Intern, I19N Team

May 2019 - Jul 2019

- Improved Google's CNN-RNN architecture for classifying sketches in Photoshop.
- Outperformed SketchNet (state-of-the-art, 2018) by 12% mAP on Quickdraw dataset.
- Modelled a BERT API to summarize user's art journey to a blog on Adobe Spark.
- Wrote a PySpark script to query Experiences DB, ~60x faster compared to Hadoop.

SKILLS & PROJECTS

Expert in C++, Flutter, React.JS, AWS Tech Stack, PyTorch. Experience in Kafka, Spark, GraphQL.

Google Summer of Code 2020 @ JuMP, Julia

Designed [DiffOpt.jl](#), a differentiable convex optimization programming package in Julia.

Google Summer of Code 2018 @ ViSP, INRIA

Leveraged C++ to create an Android SDK for real-time object pose detection and OpenGL rendering.

RESEARCH EXPERIENCE

Scalable Clustering of Lines - Thesis

[\[Link\]](#)

Introduced a scalable algorithm for clustering lines and affine subspaces of fixed dimensions. Achieved data reduction via coresets approximating; ran simulations on PARAM supercomputer.

Discounted Stochastic Games and Applications - UG Project

[\[Link\]](#)

Devised a markov perfect game for intrusion detection and proved it was robust in terms of constraint sensitivity. The work was published as **Globalized Robust Markov Perfect Equilibrium for Discounted Stochastic Games and its Application on Intrusion Detection in Wireless Sensor Networks**, *Japan Journal of Industrial and Applied Mathematics*, Volume 37, 283–308 (2020).