Brahmnoor Chawla

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Work Experience

Google *September 2023 - Present*
Software Engineer III - Memory Recommender, Google Photos Mountain View, CA
Media Coverage: Forbes | FastCompany

- Leading design and execution across the Memory Recommendation space, collaborating cross team to optimize relevance and personalization of content, with a **projected meaningful Daily Active User growth of 12%**.
- Maintaining a recommendation server with a combination of **Integer Programming and ML-driven signals** using Java, C++ scaffolding, Boq, & Spanner which **serves 1B+ users**.
- Collaborating with Google Research and Google One, influencing design and decisions x-Product through **tech talks, design reviews** and **data analysis (in Google SQL)**.

Software Engineer II - Machine Intelligence, Google Photos *August 2021 - September 2023*
Media Coverage: Verge | TechCrunch | CNet

- Worked on **12+ critical launches**, which collectively resulted **in 10%+ (150M+) increase in MAU** (Monthly Active Users).
- Designed and built infrastructure for notification recommendation and delivery with a **server QPS (Queries Per Second) of over 100k** using Java, C++ & Spanner, while collaborating with **Google Research** to use ML models to improve content curation, timing, and delivery.

Google *June 2020 - September 2020*
Software Engineering Intern - Machine Intelligence, Google Photos Mountain View, CA
Media Coverage: 9to5Google

- Designed the infrastructure to select the most interesting segments from long user videos, implementing data pipelines for Action Moments and Photobooth ML models to pick interesting clips, resulting in **16% increased user coverage and engagement** in early demos.
- Built infrastructure for Suggestor nodes from ground up using C++ to filter out the interesting clips, and **designed new RPCs in Java** to pass this information to the web and mobile clients.

Nuro ***(Autonomous Vehicles Unicorn Start-up)*** *September 2020 - January 2021*
Software Engineering Intern - Infrastructure, Autonomy Tools Mountain View, CA

- Designed a **gRPC** service to directly access a **Postgres table** for log search, using **Kubernetes and Python**, resulting in **12% improvement** in processing time.
- Implemented infrastructure to switch from offline to online processing of car logs in order to create a real-time world state in the autonomous vehicle itself, **reducing processing time of these logs by a day.**

Google *June 2019 - September 2019*
Software Engineering Intern - YouTube Ads Mountain View, CA

- Orchestrated data to build an internal dashboard in **Typescript and Angular** to track data backfill tasks for ads targeting, which reduced time from data generation to running the **machine learning models by 12 hours**.
- Consolidated the user data generation and profile pipeline by adding a new, automatically invoked testing phase using **C++** and **Spanner** which reduced redundant tasks and decreased processing time from **2 hours to 45 minutes**.

Princeton University - Research at Human-Computer Interaction Lab *March 2019 - May 2019*
Research : Understanding South African Mobile Users' Perceptions of Privacy and Current Behaviors on Facebook and WhatsApp. ... **Chawla** et. al. *Proceedings of the 29th USENIX Security Symposium.* Boston, MA, August 2020.

Awards & Recognition

- **ACM-ICPC**, Honourable Mention - Asia Regionals (China-Hong Kong) *October 2018*
- **International Olympiad in Informatics** - Ranked 11th - India Region *January 2017*
- **Competitive Programming Team** at Drexel & teaching algorithms at DrexelADS *June 2020*

Education

Drexel University, *Philadelphia, PA* *June 2021*
B.S. in Computer Science (Honors) GPA: 4.00/4.00

Princeton University, *Princeton, NJ* *January 2019 - June 2019*
Exchange - B.S in Computer Science GPA: 4.00/4.00

Selected coursework (G: Graduate Level, T : Taught the course as a TA) :
Advanced Algorithms (G), Theory of Computation (G), Computer Networks, Data Structures, Systems Programming, Software Architecture, Functional Programming, Systems Architecture, Machine Learning (T)