SURBHI MADAN

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EDUCATION

Brown University — Providence, RI

Bachelors of Science (Sc.B.) in Computer Science — September 2013 - May 2017

TECHNICAL SKILLS

Mobile development (Android), Integrating AI-powered capabilities with consumer products, Performance optimization and observability, Sustainable Platform and Infrastructure Architecture Design, API Design, Deep Learning, Data Analysis, Software Testing Methodologies, Java, C++, Python, Kotlin

WORK EXPERIENCE

Google — New York, NY

Senior Software Engineer, Maps Platform and Infrastructure — 2022 - Present

- Currently leading product development on integrating AI-based experiences with Google Maps to aid real world exploration journeys.
- Led a restructuring of the rendering architecture of Android and iOS native Google Maps apps to a cross-platform Server Driven UI framework.
- This effort is **launched** with several feature teams from web search including AI overviews, travel, shopping, lodging, events partnering with Maps to bring relevant content to maps search. See [press on integrating AI place content with maps platform](#)
- Subject matter expert on the maps serving stack and API design for Maps platform for feature teams across Google Maps and Search.

Google — New York, NY

Software Engineer, Google Maps for Android — 2017 - 2022

- Lead efforts to gain performance improvements of 9.7% on Google Maps for Android rendering by designing, scoping, and implemting a robust latency instrumention framework on the native app and using the data to analyze headroom and implement improvements.
- Worked on filters on Android Maps search queries including developing an API for multi-option select filters for maps search, and launched cuisine and price filtering using it, increasing filter usage by 100k searches a day. Contributed to Google-wide material styling by building common components for filter chips used across iOS and Android Maps.
- Collaborated with Core Maps Platform to develop a server side map rendering stack instead of a client native one, reducing time to deploy rendering changes on the map from 2 months to 1 week.
- Led the integration of place relevant content on map pins, making it easier for users to compare places at a glance, improving daily map usage by 1.5%.

Facebook — Menlo Park, CA

Software Engineering Intern, News Feed Ranking — May 2016 - September 2016

- Planned and implemented automation for feed ranking model refreshes and implemented a framework to combine 3 pipelines: feature selection, feature extraction, output training and evaluation, reducing the time for manual refreshes that needed to be done bi-weekly before this.

Google — New York, NY

Engineering Practicum Intern, Legal Infrastructure — May 2015 - September 2015

- Implemented a redaction feature for an internal tool developed by the legal team to help cut down data processing time and speed up legal request processing. Launched feature into production used by Google's legal team.

Invited Talks

Advances in Software Testing Automation SREday NYC

<div style="text-align:right">February 2025</div>

- Presented on the current and future trends in Software Testing Automation in the new age of LLM based Software Engineering. SREday is a Site Reliability and Dev Ops conference with a 1000+ attendees across 3 countries.

Fundamentals of Server-Driven UIs ELEVATE Conference

<div style="text-align:right">March 2025</div>

- Presented on the fundamental architecture components of cross-platform server-driven UIs with a focus on mobile development and a comparison of the tradeoffs with client-driven UIs. ELEVATE is a conference founded by Girl Geek X focusing on engineering careers and technical topics with an eye towards bringing together successful women in technology.

Designing a Server-Driven UI System Women in Tech Global Conference

<div style="text-align:right">May 2025</div>

- Presented a deep-dive into the key components of a server-driven UI architecture for cross-platform rendering at the largest Women in Tech conference organized by the womentech network.

Awards, Teaching, and Volunteering Experience

Peer Reviewer 15th IEEE Symposium on Computer Applications and Industrial Electronics

<div style="text-align:right">May 2025</div>

Peer reviewer for conference paper submissions - ISCAIE 2025

Industry Judge Globee Awards for Disruptors, Artificial Intelligence, and Technology

<div style="text-align:right">Spring 2025</div>

Invited as an industry-expert Judge for 3 categories: Awards for Disruptors, Technology, and innovations in Artificial Intelligence for the 2025 Globee Awards

Intern Host Google, NY

Google Maps for Android Summer 2020

Hosted 3 post-sophomore year interns with the Google STEP intern program and successfully mentored them towards launching their project on the team and securing return offers.

Senior Prize in Computer Science Brown University

For services to the department and outstanding academic work. Link to announcement. May 2017

Head Teaching Assistant Brown University

Data Structures and Algorithms Spring 2016 and Spring 2017

Hiring and managing a staff of 40 TAs, developing course content, lecture material, teaching sections, homework assignments, and coordinating grading and office hours for a class of 200+ people.

Teaching Assistant Brown University

Object Oriented Programming in Java Fall 2016

Teaching Assistant Brown University

Introduction to Systems Programming in C Fall 2015

Teaching Assistant Brown University

Data Structures and Algorithms Spring 2015