Saurav Prateek

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Professional Experience (5+ years)

G Google
Gurugram, India
May 2025 - Present

Senior Web Solutions Engineer (L5) | gTech (Google Technical Services)

- Leading Headroom tool that enables Video Specialists across LCS and GCS to perform video headroom planning for their book of business using historical data from their advertiser, a variety of methodologies to project headroom forecast, and multiple planning tools as a part of the process.

Web Solutions Engineer - II (L4) | gTech (Google Technical Services)
Nov 2022 - April 2025

- Designed and developed the **Ads Headroom Planning** and **Projection** tool for **Video** based campaigns in [Google Ads](#) from scratch allowing Ads Specialists to project and analyse future performances of **500+ Video Campaigns** and **100+ AdWords Accounts** at once.
- Implemented an **asynchronous** approach to import multiple AdWords Account in-parallel using **PromiseGraphs** (an async framework) and [Fire-and-Forget](#) pattern. This helped in successfully importing **15+** dimensions of Campaigns having across **1 Million+** results within **30 seconds**.
- Designed and implemented **SQL data pipeline** from scratch for crunching Google Ads' **LCS** and **SMB** pods data. The pipeline had **30+** nodes forming a graphical structure and processing **1.5 Million+ quarterly** ads sales data.
- Awarded a [Spot Bonus](#) from the **Director** of Google's Tools Automation and Infrastructure (TAI) team for delivering the Ads Headroom Planning product under a strict deadline from scratch.

Web Solutions Engineer - I (L3) | gTech (Google Technical Services)
Jul 2021 - Nov 2022

- Led the tool enabling **Bulk** Validation/Implementation support for **10+** Google Ads Entities involving - Site-links, Callouts, Campaigns, Ad Groups, Product Groups, Listing Groups and much more. This led to time savings of **60 minutes** per case.
- Implemented AdWords **streaming** API to support the import of **100K+** response rows per API request.
- Implemented **Caching** for the Product Groups of the AdWord accounts to reduce the API response time by **82%**.
- Developed a **recursion** and **backtracking** based solution to support the real-time import of hierarchical Product Groups (a google ads-entity) in bulk.

GG GeeksForGeeks
Noida, India
Jun 2019 - Jul 2021

Software Development Engineer - 1

- Designed a **Microservice** for handling incoming requests on the platform. Reduced load over **53%** on the Database through caching.
- Worked on Amazon [DynamoDB](#), designing scalable and efficient Database schema architectures. and product's web application including backend (Core PHP, AJAX, Dynamo DB, SQL) and front-end (HTML5, CSS3, JS, Bootstrap 3).

Education

KCC Institute of Technology and Management (AKTU University)
Greater Noida, India
Aug 2015 - Jun 2019

B.Tech | Computer Science and Engineering (CS)

- Completed the entire course work with an aggregate of **82%** and passed with Distinction + Honours

Projects & Open-Source contributions

LangChain - Google Vertex AI
[View Repo](#)
[My Contributions](#)

Open Source Contributor on Github

- Involved as an active open source contributor for the release of version **2.0.14**.
- Added the support for **maximum tokens** in the **Vertex AI Chat LLM**.
- Improved the performance of the **Image Bytes Loader** module by caching the instance of the module and avoid creating repeated instance of **GCS** (Google Cloud Storage) client on every call.

LangPost - An AI Agent that creates a Linkedin post for you!   [View Repo](#)
Techstack: **TypeScript**, **LangGraph** (framework by LangChain)

- An AI agent that used **Few-Shot prompting** to understand the patterns and curates a LinkedIn post for a given context.
- It learns the behaviour and patterns from the labelled datasets to curate the content in the author's style of writing.
- The project was appreciated and shared by [LangChain](#) on their Linkedin page. [**[View](#)**]

Micrograd - A Neural Network from scratch   [View Repo](#)
Techstack: **Java**, **Python**

- Designed a **Value** class to express the mathematical equations in the form of Graph and perform backtracking for **backpropagation** involving gradient calculation and parameter (weights + bias) updates.
- Designed a **Neuron** with collection of weights and a bias along with **Layer** (collection of Neurons) and **Multi-Layer Perceptron** (collection of Layers) to build the entire Neural network architecture from scratch.

Systems That Scale - My engineering Newsletter   [View Newsletter](#)
Newsletter has **30K+ Subscribers**

- My software Engineering newsletter on Linkedin is subscribed by over **30,000+** Engineers and Leaders.
- It has **50+** editions on diverse Software Engineering topics including Distributed Systems, System Design, Low Level Design, Machine Learning, LLM and much more.

Internship Experience

Birla Institute of Technology (BIT Mesra)   Patna, India
Research Project Intern   **Jan 2019 - Feb 2019**

- Developed a Generalised Model in order to increase the Accuracy and **Attack Detection Ratio** (ADR) of the System through **Decision Tree** Model carried on the **UNSW_NB_15** Intrusion Dataset.

India Meteorological Department (IMD)   New Delhi, India
Project Intern   **May 2018 - Jul 2018**

- Developed a Web Application that can generate an Intensity Heat Map of Earthquake at specific Latitude, Longitude position. Used **Google Maps API** to generate a **Heat Map**.

Achievements & Certificates

Recognised Content Creator in the developer community
60K+ Followers on **Linkedin** and **2K+** Subscribers on **Youtube**

- I actively create Software Engineering and related content on **Linkedin** and **YouTube**. My [Youtube channel](#) is subscribed by **2000+** engineers and my [Linkedin](#) profile has a follower base of **60,000+** Engineers and Leaders.
- I have delivered multiple in-person tech-talks in numerous events organized by **Google Developer Groups** (GDG) and others. My [Commudle profile](#) holds my list of successfully delivered technical talks.

Deep Learning Specialization

- Completed "**Neural Networks** and **Deep Learning**" course as a part of the specialization. [View Certificate](#)
- Completed "**Improving Deep Neural Networks**: Hyperparameter Tuning, Regularization and Optimization" course as a part
- of the specialization. [View Certificate](#)
  Completed "**Sequence Models** (**NLP**)" as a part of the specialization. [View Certificate](#)

Professional / Organizational achievements

- Developed an AI powered workflow that won a **second** place in the org wide global Hackathon - Hack-a-gTech. [[View Award](#)]
- Promoted from **L3** to **L4** position within a span of **1.5** years and from **L4** to **L5** in the span of **2.5** years.
- Awarded a **Spot bonus** by the **Vice President** of gTech at Google for Coding Excellence [[View](#)].

Competitive Programming achievements

- Competed in [**ACM ICPC**](#) **Regionals** and secured a team rank of **73** all over India.
- **4 Star** rated programmer on [Codechef](#) and a **Specialist** on [CodeForces](#). Holds a Contest rating of **1851** on [LeetCode](#).
- Successfully cleared **Codechef Data Structure and Algorithms Program** (CCDSAP) both [Foundation](#) and [Advanced](#) level.