

# Maninderpal Singh

[msc24x@gmail.com](mailto:msc24x@gmail.com) | [cambo.in \(portfolio\)](https://cambo.in) | [github.com/msc24x](https://github.com/msc24x) | [linkedin.com/in/msc24x](https://linkedin.com/in/msc24x)

## EDUCATION

<b>Punjabi University</b> <i>Department of Statistics — B.Sc. in Computer Science, Statistics and Mathematics</i>	89.8 Percentile <i>Jul. 2019 – Jul. 2022</i>
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## EXPERIENCE

<b>Instahyre</b> <i>SDE I</i>	Sep 2023 – Present <i>New Delhi, India</i>
<ul style="list-style-type: none"><li><b>Product Collaboration:</b> Partnered closely with Product Managers and cross-functional teams to design and implement features across in-progress and existing modules, contributing to iterative product improvements and timely feature delivery.</li><li><b>Platform Reliability:</b> Investigated and resolved a wide range of functional and performance issues across backend services, improving system stability, reducing recurring production bugs, and enhancing overall module reliability.</li><li><b>Module Ownership:</b> Owned multiple platform modules at different stages, taking responsibility for feature development, bug resolution and performance optimizations.</li></ul>	
<b>Buyceps</b> <i>Software Engineer</i>	Dec 2022 – Sep 2023 <i>Mumbai, India</i>
<ul style="list-style-type: none"><li><b>Lead backend engineer:</b> 'Buyceps Marketplace', producing fundamental platform level changes, such as unified authentication setup, order/shipment processing, data modeling etc</li><li><b>Search:</b> Developed an Algolia powered 'Product Browser', created DB indices and UI/UX for employees, to make browsing blazingly fast</li><li><b>Database load:</b> Responsible for noticeable optimizations on major GraphQL resolvers and REST APIs, effectively reducing the N+1 problem by 75 percent, in terms of SQL calls</li></ul>	
<b>Studypaq</b> <i>Software Engineer</i>	Oct 2022 – Dec 2022 <i>California, United States</i>
<ul style="list-style-type: none"><li><b>Security:</b> Discovered &amp; fixed a critical vulnerability in company's payment accessible core product</li><li><b>API design:</b> Took responsibility of designing and developing core of the APIs and backend architecture for MVP Studyplan feature</li><li><b>Server performance:</b> Improved highly used endpoints' response by approx. 47% on average, improving initial server response time for SSR</li></ul>	

## PROJECTS

<b>Hunter - Online contests hosting platform (SaaS)</b> <i>Repository Deployed at <a href="https://hunter.cambo.in">hunter.cambo.in</a></i>	Jan 2022 – Sep 2022
<ul style="list-style-type: none"><li><b>Backend:</b> Wrote the back-end architecture involving Node's ExpressJs in TypeScript, &amp; PlanetScale for MySQL</li><li><b>Client side:</b> Leveraged Angular framework to build components/services in TypeScript, consuming REST APIs</li><li><b>Remote code execution:</b> Wrote Python &amp; Bash scripts to run inside Docker container that compiles, executes and test participants' code; supporting C, C++, JavaScript and Python</li><li><b>Deployment:</b> An NGINX instance initially on Azure's VM &amp; DB service, then migrating to Oracle &amp; PlanetScale</li></ul>	
<b>DinoPlusPlus - A Terminal Based C++ Game (ASCII Graphics)</b> <i>Repository</i>	Apr 2021 – May 2021
<ul style="list-style-type: none"><li><b>Gameplay:</b> Programmed the entire game play mechanics, menu system &amp; animations without any specialized console game engine or code library</li><li><b>Frame desynchronization:</b> Fixed by caching the frame until fully computed and then drawing all at once</li><li><b>Collision detection:</b> Implemented proper edge detection of any object colliding, render time</li></ul>	
<b>Contactless - WhatsApp's API driven android app</b> <i>Repository, XDA Forum</i>	Jul 2020 – Aug 2020
<ul style="list-style-type: none"><li><b>Android app:</b> Developed UI/UX using Kotlin consuming Web API allowing users to chat with any contact</li></ul>	

## TECHNICAL SKILLS

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**Languages:** Python, TypeScript, JavaScript GoLang, C/C++, Bash

**Tools/Frameworks:** Django, Angular, REST APIs, Git, Mercurial, NextJS, NodeJS, GraphQL, Microservices

**Databases:** MySQL, PostgreSQL, MongoDB

**Cloud & DevOps:** Docker, NGINX, Scripting, Azure, Oracle Cloud

**Core Competencies:** System Design, Performance Engineering, Management, Scalability, Data Structures & Algorithms, AI