# Maninderpal Singh

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#### Education

#### **Punjabi University**

Department of Statistics — B.Sc. in Computer Science, Statistics & Mathematics

#### EXPERIENCE

#### Instahyre

Full-Stack Developer

Sep 2023 – Present New Delhi. India

Jul. 2019 - Jul. 2022

Percentile 89.8%

- **Bug fixes:** Have been investigating a wide range of issues and developing fixes in a routine within the team, resulting in improvement of various modules written in AngularJs and Django, in terms of reliability and user experience
- **Development:** Collaboratively working and implementing features to develop and enhance some of the in-progress and existing modules

### **Buyceps**

Software Engineer

- Lead backend engineer: 'Buyceps Marketplace', producing fundamental platform level changes, such as unified authentication setup, order/shipment processing, data modeling etc
- Search: Developed an Algolia powered 'Product Browser', created DB indices and UI/UX for employees, to make browsing blazingly fast
- Database load: 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

#### Studypaq

Software Engineer

Oct 2022 – Dec 2022

California. United States

- Security: Discovered & fixed a critical vulnerability in company's payment accessible core product • API design: Took responsibility of designing and developing core of the APIs and backend architecture for MVP
- Studyplan feature
- Server performance: Improved highly used endpoints' response by approx. 47% on average, improving initial server response time for SSR

#### Projects

## Hunter - Online contests hosting platform (SaaS)

Repository Deployed at <u>hunter.cambo.in</u>

- Backend: Wrote the back-end architecture involving Node's ExpressJs in TypeScript, & PlanetScale for MySQL
- Client side: Leveraged Angular framework to build components/services in TypeScript, consuming REST APIs
- Remote code execution: Wrote Python & Bash scripts to run inside Docker container that compiles, executes and test participants' code; supporting C, C++, JavaScript and Python
- Deployment: An NGINX instance initially on Azure's VM & DB service, then migrating to Oracle & PlanetScale

## DinoPlusPlus - A Terminal Based C++ Game (ASCII Graphics)

#### Repository

- Gameplay: Programmed the entire game play mechanics, menu system & animations without any specialized console game engine or code library
- Frame desynchronization: Fixed by caching the frame until fully computed and then drawing all at once
- Collision detection: Implemented proper edge detection of any object colliding, render time

#### Contactless - WhatsApp's API driven android app

#### Repository, XDA Forum

• Android app: Developed UI/UX using Kotlin consuming Web API allowing users to chat with any contact

#### Technical Skills

**Programming/Scripting Languages**: Python, JavaScript/Typescript, C/C++, Bash Tools/Frameworks : Django, Angular, Postgres, NextJs, SQL, Git, Mercurial, Docker, MongoDB, GraphQL Technical : Operating-Systems, Statistics, Linear Programming, OOP Design, Data structures & Algorithms Soft Skills : Communication, Management, Planning

Jan 2022 – Sep 2022

Apr 2021 – May 2021

Jul 2020 – Aug 2020

Dec 2022 - Sep 2023

Mumbai, India