

# UMANG GUPTA

📞 +65 93790540 | ✉ umanggupta1103@gmail.com | 🌐 umangpt.com | 🔗 linkedin.com/in/umangguptacs | 🐙 github.com/Usgupta

## EDUCATION

**Singapore University of Technology and Design** | GPA 4.46/5.0, Honors List Sept. 2020 – May 2024  
Bachelor of Engineering in Computer Science, Minor in Artificial Intelligence  
**Stanford University** | International Honours Programme Jun 2023 – Aug 2023  
**Relevant courses:** Data Structures and Algorithms, Operating Systems, Concurrency, Database, Networks, Machine Learning, Artificial Intelligence, High Performance Computing, Data Science  
**Certification:** (Pursuing) Google Machine Learning Engineer

## WORK EXPERIENCE

**Grab** Jan 2023 – May 2023  
Software Engineer Intern | Kotlin, RxJava, Dagger, TCP, Android Studio, Git

- Reduced Grab Driver Android app debugging time by 45% with a custom TCP socket message logger
- Boosted Grab Driver activity through complete Android development of an incentivization feature.
- Actively participated in Grab-a-thon to increase Driver jobs by manipulating the matching algorithm to change filters after a period

## PROJECTS

🔗 **HPC-Enhanced Animation** | Python, Rocky Linux, Slurm, Docker, Anaconda Jul 2023 – Aug 2023

- Orchestrated integration of animation research from Meta's into Stanford's High Performance Computing cluster
- Setup the complete cluster from installing OS to setting up compute and master node

🔗 **RDTONUDP** | Python, Networking, TCP/UDP, Git Sep 2022 – Oct 2022

- Designed and implemented a robust, congestion-controlled, pipelined RDT protocol over UDP, enabling secure text file transfer across unreliable network
- Successfully achieved zero crashes in extensive testing on various remote Linux machines

🔗 **Dygnostic** | Ruby on Rails, React, Python, Google Cloud, Postgresql, Cucumber, Rspec May 2022 – Aug 2022

- Led a team of 6 to develop a web app to automate TSH Group's machine inspection to attain 30% time reduction
- Utilised Cloud Vision to automatically analyze quality of label on the machine components
- Developed the best architecture for implementing REST APIs and microservices, recognized as the best-tested software in 15 projects through rigorous unit and e2e testing

🔗 **Shell** | C/C++, Linux, Git Jun 2022 – Jun 2022

- Created shell to find files, change directory, count lines, check daemon processes and show available commands
- Succeeded as the fastest coder to create shell in 12 hours among 250 students with no crashes from auto-testing

📺 🔗 **FDM5K** | Alchitry, Lucid, FPGA, Git Feb 2022 – Apr 2022

- Led a team of 8 to develop a hardware game inspired by Bishi-Bashi arcade game
- Won 5th place among over 200 students for hardware quality, effectiveness of datapath, complexity of game

🔗 **Who Wants to be a Millionaire** | C++, Git Sep 2019 – Oct 2019

- Developed an online version of "Who wants to be a millionaire" using C++
- Recognized as top 5 C++ projects among 150 students

## AWARDS & ACCOMPLISHMENTS

**The Jyoti and Aditya Mathur Environmental Award** SUTD  
Organised SUTD's first sustainability design thinking hackathon with SG Minister as Guest of Honor Mar 2022

**The Design and AI in the Data Driven World Challenge** SUTD X DBS  
Won 500 SGD in pitching an AI powered credit card recommendation engine in Paylah App Sep 2021

## REFERENCES

🔗 **Steve Jones** | Director, High Performance Computing Center (HPC) @ Stanford HPC Course Professor

🔗 **Gokul G** | Software Engineer Manager II @ Grab Manager

🔗 **Natalie Agus** | Senior lecturer @ ISTD, SUTD Core CS Professor

16 October 2023

To Whom It May Concern

### **Eligibility for Employment Pass**

1 Gupta Umang Sanjeev G3604871P is expected to graduate from Singapore University of Technology and Design and has a Ministry of Education bond obligation to serve in Singapore.

2 This letter serves to inform you that the Singapore government will exercise flexibility in the assessment of the Employment Pass application of Gupta Umang Sanjeev. You should also use the Self-Assessment Tool on the Ministry of Manpower's website for an indicative assessment on whether the applicant qualifies for an Employment pass. If your company finds this graduate suitable for a position and makes an Employment Pass application to the Ministry of Manpower (MOM), the necessary work pass arrangements will be facilitated after receiving your submitted application. This is subject to the qualifying notes overleaf (as attached), which includes complying with the Fair Consideration Framework.

3 This letter is supported by the Ministry of Manpower and is valid for 12 months from the date of graduation or date of issue, whichever is later.

4 You may email Daniel Cheong, the Career Coach, at [daniel\\_cheong@sutd.edu.sg](mailto:daniel_cheong@sutd.edu.sg) for clarification. Thank you.

Yours sincerely,



Angelvin C. Parma  
Head, SUTD Career Development Centre

**Qualifying notes:**

- 1      The applicant named overleaf is eligible to apply for an Employment Pass if he/she:
  - (a)    secures full-time employment in a company of good standing in Singapore;
  - (b)    is to be engaged in managerial, executive or specialised job;
  - (c)    submits an application for Employment Pass together with certified copies of educational certificates;
  - (d)    is not on Government agencies' adverse record.
  
- 2      Professionals such as doctors, lawyers, architects, dentists, pharmacists etc. have to register with the relevant professional regulatory body before they are allowed to practise their profession in Singapore. Those who intend to practise their profession would have to seek registration before the Employment Pass is issued.
  
- 3      This letter does not exempt employers from the Fair Consideration Framework. This includes the requirement to advertise the job vacancies on the National Jobs Bank before submitting an Employment Pass application. Employers should consider all applicants fairly, regardless of nationality.