Naman Jain

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Senior Undergraduate in the Materials Science and Engineering Department | jainnaman027 | namanjain27

ACADEMIC QUALIFICATIONS

Year	Educational Qualification	Institute	Performance
2020 - Present	B.Tech.	Indian Institute of Technology Kanpur	7.7/10.0
2020	Class XII (CBSE)	LBS Convent School, Kota	92.8%
2018	Class X (CBSE)	Krishna Public School, Raipur	97.8%

PROFESSIONAL EXPERIENCE

| LTIMindtree Limited | Software Developer Intern *(May'23 - Jul'23)*

Received a **Pre-Placement Offer (PPO)** for exceptional performance

Objective	• Develop **AI** features for a **chatbot** used by BU heads for **IP & patent** management, using MS Bot Framework SDK
Approach	• Pilot test for replacing **CQA** model with Conversational Language Understanding model in MS **Language Studio** • Built a **QnA generator** in python that periodically extracts data from website into a **structured dataset** in tsv file • Established a **react API** channel to fetch username & profile picture from website and display it on chatbot iframe • Engineered an **optimal threshold** value of confidence score to call for fallback or reply with top related questions • Built a collaborative testing environment using **ngrok** to establish live local server, Azure bot & language services
Result	• Standardized communication flow using **react.js** frontend, **node.js** backend to improve accuracy & response speed • **400+** new QnA pairs with interactive chitchat were added using **Azure Cognitive Services** and bot sent for **UAT**

SURGE 2022, IIT Kanpur | Research Intern | *Mentor: Prof. Niraj M. Chawake, MSE, IITK* *(May'22 - Jul'22)*

Objective	• Search, analyse, predict, and generate **creep** curve plots for α-β Titanium (Ti-6 Al-4) based high temperature alloys
Approach	• **Data mined** to selectively extract and store creep data from pdf of **10+** research papers using python and **NLP** • Feature engineered **4** out of **7** variables through principal component analysis (**PCA**) and Pearson correlation • Evaluated performance through **9 Regression Models** to predict unknown variables at new temperature
Result	• Formulated framework massively help to **design parts** with low geometrical tolerance; Report accepted by SURGE

PROJECT WORK

Optical Property Prediction of Thin Film | Paper sent for Publication *(Prof. Shikhar Misra, IITK)* *(Aug'23 - Jan'24)*

- Extracted digital data from spectra graphs of various research papers using advanced OCR techniques to build training dataset
- Tested and analysed various OCR engines, feature engineered and hyper-tuned ML models to finally build a complete framework

Territorial Attack – Android Game | Game Development Club, IITK *(Jun'21 – Aug'21)*

- Lead programmer in a team of **6**, in developing a projectile shooter 2D **multi-player android** game in C# using **Unity** engine
- Integrated **PUN** for multiplayer setup & coded multiple functionalities across **12** levels using Unity Documentation & **OOPs**
- Published game on Google **Play Store** with **800+** downloads & received invite from Game Development World **Championship**

3D WebGL Renderer Course Project | Introduction to Computer Graphics *(Prof. Soumya Dutta, IITK)* *(Aug'23 - Nov'23)*

- Engineered a 3D Graphics Renderer Engine in **JS** to load and visualize vertex data using webGL and **path tracing** technique
- Developed features- model loading, material customization, **modular lighting,** camera system, **texture mapping**, face culling
- Implemented Blinn-Phong lighting model & designed **UI** Widgets, to seamlessly create, load, and manipulate objects **real-time**

Robo Line Detection AI Course Project | Image Processing *(Prof. Tushar Sandhan, IITK)* *(Aug'23 - Nov'23)*

- Developed a robust line detection algorithm for real-world environments that effectively detect border lines in **noisy** tile images
- Implemented Gaussian Blur, contrast stretching, **Canny edge detection** algorithms to enhance & accurately detect border lines
- Successfully applied robotics principles to solve **practical** challenges in tile arrangement in a dataset of **5000+** images

POSITION OF RESPONSIBILITY

Founder & UG Convener | MatSoc – The Materials Society, IIT Kanpur *(Jun'22 – Jul'23)*

Received a **Letter of Recommendation** for showcasing exceptional team building & **managerial skills** by facad Prof. Shikhar Misra

Leadership	• Founded a **600+** member **Departmental Society** to engage & promote MSE research & technology awareness
Initiative	• Headed a team of **20+** & organized Orientation, Farewell, **6** alumni talks & workshops, **Research Scholars' Day** • Formulated an annual structure of events, project proposals, society's **financial budgeting** structure and rules • Laid foundation to annual MatSoc **Newsletter**, Alum Connect Program, Summer Core projects, website & socials
Impact	• Witnessed huge engagement in all events impacting **350+** UGs, 200+ PGs, 25+ professors and alumnus world-wide

Coordinator | Game Development Club, IIT Kanpur *(May'22 - Apr'23)*

Leadership	• Leading a 3-tier team of **40**+ members to foster Game Development by organizing game jams, workshops & projects
Initiatives	• Spearheaded the conduction of GameDev **Bootcamp** for **1200+** students involving 4 workshops and final project • Played a pivotal role in **promoting** the stature of GameDev, IITK from a society to a **club** in the SnT Council, IITK
Mentoring	• Mentored multiple specialized projects on Gamification, **Augmented Reality** & **AI** games using Unity Game Engine
Impact	• Boosted the reach in student community by **150%** in workshops & socials with campaigns like GameDev Insights

TECHNICAL SKILLS | RELEVANT COURSES

Programming Languages: Python, C++, C#, MATLAB, SQL **Libraries/Software:** Pandas, Unity, TensorFlow, Jira, Azure, Git, WebGL

Fundamentals Of Computing	Intro to TensorFlow for AI, ML & DL	Machine Learning	Data Structures & Algorithm
AI/ML in Materials Engineering	Introduction to Computer Graphics	Image Processing	Probability & Statistics