

Shivam Kumar Pandey

Instrumentation Engineering | Minor in Computer Science (B.Tech 4Y)
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EDUCATION

Indian Institute of Technology (IIT), Kharagpur <i>Bachelor of Technology in Electrical Engineering, Minor in Computer Science</i>	Nov'20 - May'24 <i>CGPA: 8.78/10</i>
VidyaGyan School, Sitapur, Uttar Pradesh <i>Central Board of Secondary Education (CBSE), Class 12</i>	Apr'17 - Apr'19 <i>95.8%</i>

EXPERIENCE

Software Development Intern BNY Mellon Technologies Chennai, India <i>Objective: Development of Replay Utility web application for modernization of the custody framework and architecture</i> <ul style="list-style-type: none">Developed REST API for 'Replay Utility Application' to replay messages to queues and topics in MQ databusCreated Angular-based UI supporting server-side sorting, filtering, and pagination using Angular gridsEngineered a web app using SpringBoot and Angular for a blind school as part of Hackathon for social cause	May'23 - Aug'23
Software Development Intern Proficient Vision Solutions Pvt. Ltd. <i>Objective: Development of user interface and GPU-accelerated backend architecture for KlearVision desktop application</i> <ul style="list-style-type: none">Implemented client-server communications using Java RMI, allowing remote processing of video streamsEnhanced rain and fog processing algorithm, boosting multi-panel HD video streaming rate from 16fps to 30fpsDeveloped GPU-accelerated frame compression-decompression system, reducing UDP packet size by 90%	Dec'21 - Apr'23
Software and Quant Strategy Development Intern Quantxpress Technologies <i>Objective: To develop the infrastructure and quantitative strategies for algorithmic high-frequency trading</i> <ul style="list-style-type: none">Developed and unit tested backtesting engine using .NET framework, deriving various quantitative parametersPerformed research on genetic algorithms for portfolio optimization to derive the parameters for a strategyImplemented a low latency C++ multicast UDP socket to transmit high speed trade data stream	Nov'22 - Dec'22

PROJECTS

Inter Hall Open Soft Competition TSG, IIT Kharagpur <i>Objective: Development and hosting of an end-to-end cloud-based containerized web application for a food chain company</i> <ul style="list-style-type: none">Containerized orders microservice using docker and deployed it using Google Kubernetes EngineDesigned microservice-based architecture for the application, breaking the application into 4 microservicesDeveloped Django REST API for Orders microservice, while also building a dedicated relational database	Feb'22 - Mar'22
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AWARDS AND ACHIEVEMENTS

- Attained **99.10** percentile ranking among the **1 million** candidates in the **JEE MAINS 2020** examination
- Recipient of CU Boulder Chancellor's Achievement Scholarship with admission offer from CU Boulder in **2019**
- Perfect score (**800/800**) in SAT Physics and SAT Maths level 2 subject tests conducted by Collegeboard in **2018**
- Recipient of Uttar Pradesh State Talent Search Exam Scholarship winning a cash prize of **INR 72,000** in **2017**

SKILLS

- Languages and Frameworks:** C | C++ | Python | JavaScript | TypeScript | Java | Assembly Language
- Operating Systems and Tools:** Linux | Git | Github | Docker | Kubernetes | MySQL | Shell Scripting

COURSEWORK

- Computer Science and Maths:** Programming and Data Structures | Computer Architecture and Operating Systems | Linear Algebra | Computational Foundations of Cyber-Physical Systems | Probability and Statistics

POSITIONS OF RESPONSIBILITY

Mentor Student Welfare Group IIT Kharagpur <ul style="list-style-type: none">Mentored newcomers over one year, catalyzing enhancements in their academic performance and extra-curricularProvided valuable resources and guidance to the freshers to help them select the most suitable career path	Aug'22 - Present
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EXTRA CURRICULAR

- Part of the semifinalist team of Rajendra Prasad Hall of Residence in General Championship 2022, IIT KGP
- Volunteered at **Green Pencil Foundation UP Chapter**, educating poor students of 2 villages in 2021