ROUNAK PAUL

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PROFESSIONAL EXPERIENCE

PRISM INTERN AT SAMSUNG R&D INSTITUTE INDIA

Intern

February 2024-August 2024

• Contributed to a confidential R&D project in the PRISM team, focused on Design, AI, and Automation.

EDUCATION

SRM INSTITUTE OF SCIENCE AND TECHNOLOGY, KTR

Bachelor of Technology, Computer Science and Engineering

2022-Present

CGPA: 9.05

• **Assisted** professors with **coding** for research on diabetic retinopathy detection, enhancing **algorithm efficiency**.

ACHIEVEMENTS

- **ICPC Regionalist (2x)** Qualified for ICPC Regionals twice in advanced algorithmic programming. [Profile]
- Smart India Hackathon (2023 & 2024) Two-time college nominee for the national-level hackathon.
- 3rd Place, Ultron 8.0 Hackathon Secured 3rd place in a 24-hour hackathon with 2,500+ participants.
- 4th Place, AI Cure: Parsec 4.0 Hackathon Placed 4th in an AI-focused hackathon by IIT Dharwad.
- IOQM Qualifier Ranked in the top 300 in West Bengal in India's prestigious Mathematics Olympiad.
- **OODP Hackathon Finalist** Ranked in the top 20 out of 721 teams.

SKILLS

- **Programming Languages**: C, C++, Python, JavaScript
- Frameworks & Libraries: React.js, Django, Express.js, Node.js, TensorFlow, Keras, OpenCV
- **Databases**: PostgreSQL, MongoDB
- Tools & Technologies: Git, Linux, Shell Scripting, Postman, RESTful APIs
- Machine Learning & AI: Random Forest, Logistic Regression, Deep Learning Models
- Competitive Programming: ICPC, LeetCode (Algorithms & Data Structures)

CERTIFICATION

- Meta **Back-End** Developer Professional Certificate
- Machine Learning Specialization (Coursera)
- Building Transformer-Based Natural Language Processing Applications (NVIDIA)
- Fundamentals of **Deep Learning** (NVIDIA)
- C and C++ Specialization (Coursera)

PROJECTS

- QuackStrike Built a chess engine utilizing Alpha-Beta pruning, Negamax, null move pruning, transposition tables, Zobrist hashing, move ordering, quiet move history, late move reduction, piece-square tables, and adaptive time management. Hosted on AWS EC2 with tmux for 24/7 uptime. [Lichess]
- **Voice Assistant** Automates customer interactions and provides real-time sales insights. Built with React.js, GSAP, Recharts, Qt6, Node.js, Python, and MongoDB. [Github] [Video Demo]
- **Dehazing Algorithm** Developed a haze-removal algorithm using GANs with Pix2Pix architecture for enhanced image clarity (TensorFlow, Keras). [Github] [Video Demo]
- **Face Liveness Detection** Built a real-time face detection system to prevent spoofing using deep learning models, ensuring security in authentication (React.js, Python, MongoDB). [Github] [Video Demo]
- **Heart Rate Analysis** Designed a model to predict heart rates from ECG data (Python, LightGBM). [Github]
- Weather Forecast CLI CLI tool for weather forecasting using REST APIs (Python, Linux). [Github]
- Hex Game Hex game with AI using Monte Carlo simulations and BFS for win detection (C++, STL). [GitHub]