

Pratyush Bindal

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Education

Birla Institute of Technology and Science, Pilani <i>Bachelor of Engineering in Computer Science (CGPA: 9.64 / 10.00)</i> <ul style="list-style-type: none">• Relevant Coursework: Data Structures and Algorithms, Database Systems, Object Oriented Programming, Discrete Structures & Mathematics, Logic in Computer Science, Probability & Statistics, Linear Algebra	Aug 2022 - July 2026 Hyderabad, Telangana
G. D. Goenka Public School <i>High School (Class XII: 96.6% and Class X: 97.6%)</i>	April 2018 - July 2022 Muzaffarnagar, Uttar Pradesh

Experience

Summer Research Intern <i>Indian Institute of Remote Sensing (IIRS), Indian Space Research Organisation (ISRO)</i>	May 2024 – July 2024 Dehradun, Uttarakhand
Undergraduate Teaching Assistant - PHY F111 (Mechanics, Oscillations and Waves) <i>Birla Institute of Technology and Science, Pilani</i>	Aug 2023 – Dec 2023 Hyderabad, Telangana

Skills

Languages: C, C++, Java, Python, HTML, CSS, SQL, JavaScript, TypeScript, Prolog, Verilog HDL, Assembly
Technologies: TensorFlow, PyTorch, Spring Framework, React, SolidJS, Google Cloud Platform
Databases: NoSQL, PostgreSQL & SQL-based databases like MongoDB, Supabase, Oracle MySQL
Developer Tools: Postman, VSCode, IntelliJ, Eclipse, PyCharm, Android SDK, Anaconda, Git, Docker
Libraries: numpy, scipy, pandas, matplotlib, scikit-learn, keras, seaborn, openCV

Projects

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- Reinforcement Learning In Cybersecurity** | *PyTorch, Python and related libraries*
- Implemented AE-SAC and Twin Delayed DDPG (TD3) Algorithms on the NSL-KDD Dataset for Intrusion Detection
 - Established ML-based Intrusion Detection System on the NSL-KDD Dataset to map alert-attack relations
 - Comparatively evaluated various ML-RL algorithms for Fraud & Anomaly Detection on MQTT & AWID3 datasets
- Handwritten Digit Recognizer** | *Python*
- Built a fully functional neural network recognising Handwritten Digits from scratch without using any libraries
 - Executed Data Preprocessing steps, Forward & Backward Propagation, One Hot Encoder, Gradient Descent Algorithm, ReLU and Softmax Activation functions receiving an accuracy of 86.6%
- BITSBids** | *React, Spring Framework, Mongo DB, Maven*
- Developed ready-to-scale Full Stack Bidding Website exclusive to BITSians via Google OAuth2 Authorisation
 - Applied Dynamic Price Updation, Multiple Bids Prioritisation, Anonymous Chat Client, and Filtered Product Search
- StarWars Databank** | *Typescript, SolidJS, Supabase, PL/pgSQL*
- Contributed to a DataBank Website for storing, analysing, and categorising information about the StarWars world
 - Created Frontend using SolidJS & used PostgreSQL in Supabase for developing backend database system

Honours and Awards

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- 100% Merit Scholarship Awardee (Awarded to Top 1% of the batch)
 - 80% Merit-cum-Need Scholarship Awardee (Awarded to Top 3% of the batch)
 - Among Top 255 students in IOQA 2020-21 organised by IAPT-HBCSE

Volunteership and Extracurriculars

Mathematics Mentor <i>Academic Counselling Cell</i> <ul style="list-style-type: none">• Mentored 1000+ students undergoing Mathematics I course at the institute	Sept 2023 – Dec 2023 Hyderabad, Telangana
Research, Editorial and Events Member <i>Ad Astra - Astronomy and Science Club</i> <ul style="list-style-type: none">• Gained an insightful experience researching about recent advancements in Astronomy & Astrophysics	Oct 2022 – Sept 2023 Hyderabad, Telangana