

PRATHAM GAUTAM

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EDUCATION

Indraprastha Institute of Information Technology, Delhi [IIIT-D]

Bachelor of Technology in Computer Science and Engineering

2022 – 2026

SKILLS

Languages: C/C++, Java, Python, SQL, Javascript, R, Assembly

Frameworks/Libraries: React.js, Node.js, REST API, Express.js, Tailwind CSS

Databases: MySQL, MongoDB, Firebase

Developer Tools: Git, GitHub Actions, Docker, AWS, Azure, Postman, Kafka, Linux, OpenCV

PROFESSIONAL EXPERIENCE

Defence Research and Development Organisation [DRDO]

May 2025 – Jul 2025

Software Developer Intern

Delhi

- Engineered **3 fullstack web portals** for DRDO scientists using React (Tailwind CSS), Flask, and MongoDB to streamline research workflows across ER/IPR, DIAKCOE, and Grant-in-Aid systems.
- Deployed the solution using **Docker, Kubernetes (Minikube)**, and configured **GitHub Actions** for CI/CD to ensure consistent and reproducible releases.
- Built intuitive UIs with **secure login**, dynamic forms, dashboards, PDF exports, and threaded comments for seamless collaboration and data tracking.
- Empowered research teams with a **scalable, modular system** that cut administrative overhead by over **200%** through automation and centralization.

Ray Labs

Jan 2025 – Jul 2025

Undergraduate Student Researcher

Delhi

- Optimized protein-ligand function prediction pipelines using **machine learning models** and **molecular docking data**.
- Engineered and tuned **ML models (SVM, Random Forest, MLP)** to improve docking outcome accuracy.
- Performed **data preprocessing, feature engineering, and hyperparameter tuning** on complex datasets.
- Presented research progress and findings in lab meetings with faculty and PhD mentors.

Centre for Education and Health Research Organization [CEHRO]

Apr 2024 – Jul 2024

Frontend Developer Intern

New Delhi

- Developed and maintained scalable UI components using **React.js** and **responsive design best practices**.
- Collaborated with designers to convert Figma mockups into pixel-perfect, **accessible web interfaces**.
- Implemented **frontend performance optimization**, reducing page load times by over 30%.
- Led QA efforts by writing unit tests and performing **cross-browser compatibility checks**. [\(Deployed Website\)](#)

PROJECTS

DefenseOps | **React.js, Flask, MongoDB, Docker, Kubernetes, GitHub Actions, Tailwind CSS, CI/CD**

- * Developed and deployed three full-stack web portals for DRDO scientists to manage ER/IPR filings, DIAKCOE collaborations, and Grant-in-Aid workflows—streamlining research data processes across departments.
- * Integrated secure authentication, dynamic data entry, dashboard analytics, PDF export, and comment-based collaboration using **React.js, Flask, MongoDB, and Tailwind CSS**, deployed via Docker and Kubernetes with **CI/CD pipelines on GitHub Actions**. [\(View the Code base.\)](#)

ProstateDx | **Python, scikit-learn, Pandas, NumPy, PyDICOM, OpenCV, Matplotlib**

- * Built deep learning models to detect prostate cancer and classify risk levels using MRI scans, trained on 100k+ images from the Prostate MRI US Biopsy dataset.
- * Experimented with over 100 ML models including **CNNs, Random Forest, SVM, MLP, and Naive Bayes**, achieving 85.03% accuracy in detection and 60.71% in risk classification. [\(View the Code base.\)](#)

Cappyhero | **Java, JavaFX, SceneBuilder**

- * Designed and developed a 2D arcade game inspired by “Stick Hero” using Java and JavaFX, featuring dynamic bridge mechanics and real-time physics.
- * Applied core **OOP principles**, including polymorphism, inheritance, and encapsulation, along with **multithreading** for smooth animations and responsive gameplay. [\(View the Code base.\)](#)

ACHIEVEMENTS

- * **Specialist** at Codeforces (1400+ rating)
- * Hackathon winner + 2nd & 3rd prizes | 7th place in IIIT’s Cybersecurity CTF.
- * President of DynamiX (Tech Society) and Executive Committee Member at IEEE IIITD.