



Payal Choudhary
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UG Second Year
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Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2021	0.00
Intermediate/+2	CBSE	Ashok Hall Girls' Higher Secondary School, Kolkata	2019	93.40
Matriculation	ICSE	St.Xavier's School, Jharkhand	2017	95.60

AWARDS AND RECOGNITION

- Awarded the **Institute Technical Freshmen Of The Year** (1 out of 1100+) for excellence in technical activities and significant contribution to the tech community of IIT Bombay [2020]
- Received a **Special Mention** in the field of Social Services by **NSS, IIT Bombay** for helping underprivileged children explore the wonders of science by conducting experiments and explaining related concepts [2019]
- Felicitated with the **Annual Excellence Award** at St.Xavier's School for the Academic Year 2016-2017 [2017]
- Honored with the title of **Miss Boffin** at Ashok Hall for exemplary activities in the field of Chemistry [2019]
- Awarded by the **Government of Jharkhand** for innovative ideas in the field of **Wipe Out Poverty** [2016]

WORK EXPERIENCE

- JUNIOR DEVELOPER | ABS Tech** [July '20 - Aug '20]
- Developed an **android application** that enables users to edit pictures from camera and gallery
 - Made the code robust by incorporating features such as **Dagger**(Dependency Injection) and **Butterknife**
 - Integrated third party libraries like **Dexter** and **ImageFilters** and tested application using **Junit** framework

DEVELOPMENT PROJECTS

- SAFE: SMART AUTHENTICATED FAST EXAMS** [Aug '20 - Present]
Research and Development project | Prof. Bhaskaran Raman | Computer Science Department | IIT Bombay
- Context of Project :** Safe is an **android application** having **10,000+** downloads that caters to secured assessments, proxy-free attendance, and offline quizzes in IIT Bombay

Proposed Work :

- Developing algorithms to ensure **time synchronization** and prevent **time-based attacks**
- Extensive involvement in **usability testing** and detecting **logical vulnerabilities** of the application

- InFi-INTEREST FINDER | Institute Technical Summer Project | IIT Bombay** [Jun '20 - July '20]
- Conceptualized an **android application** which connects people based on **interests and hobbies**
 - Deployed the backend in **Firestore**, frontend in **Android(Java)** and **XML**, used **Google API** for location
 - Implemented **Collaborative Filtering** to suggest people based on shared interests, distance, and activity
 - Incorporated features such as **Paging** and **ViewModel** resulting in **+10%** increase of the efficiency

- MOOD INDIGO TECH PROJECT** [Aug '20- Present]
Mood Indigo | Asia's Largest Cultural Festival | Footfall 1,46,000+ | Events 240+

- Assisted in developing an android application to be downloaded by over **50k+** people attending the fest
- Implemented **Google API** for fetching real-time location and providing direction maps to the users
- Integrated **GitHub API** to upload **BLOB** (binary large objects) after encoding it in **base64** string format
- Conceptualized implementation of new features such as customizable **Augmented Reality** characters

- TRIDENT SERVICES | Hostel 15 | IIT Bombay** [July '20- Present]
- Conceptualizing and developing an **android application**, including the UI Core, aimed at **digitizing** the queue management system of the laundry services to accommodate the needs of **1000+** hostel residents
 - Applied **real-time analysis** for maintaining queues and suggesting devices with the least waiting time
 - Used **FireBase** for authentication, real-time database and **Cloud Messaging** for sending notifications
 - Expecting over **1000+** downloads and an increase of about **40 percent** in the efficient use of machines

- NOTE KEEPING APPLICATION | Self Project** [July '20]
- Developed a user-friendly **cross platform** application to make notes and organize them in a priority order
 - Deployed the application using **Flutter(DART)** as the frontend and **SQFLITE** Database as the backend
 - Increased the efficiency of the application over **15 percent** by performing **Asynchronous Programming** using the Future, Async, Await and Then APIs and implementing **dynamic** long lists

HARDWARE PROJECTS

LINE FOLLOWER BOT | TechFest | IIT Bombay

[Jan '19]

- Engineered a bot with **5 IR sensors** capable of **tracing** white lines and **memorizing** any curved path
- Implemented a closed-loop **PID** algorithm using Arduino UNO for controlling L293D motor driver
- Took feedback from sensors to control the direction of bot using **differential** steering mechanism
- **Represented** IIT Bombay at **Meshmerize**, conducted by **Techfest**, Asia's Largest Technical Festival

OBSTACLE MANOEUVRING BOT | Electronics and Robotics Club | IIT Bombay

[Aug '19]

- Designed and built Bluetooth controlled (**HC-05**) robotic car with a differential mechanism for turning
- Used **AT-TINY** as the micro-controller, **IC7805** as a voltage regulator, and **L293D** as the motor driver

POSITIONS OF RESPONSIBILITY

CONVENER | WEB AND CODING CLUB

[Apr '20 - Present]

Selected out of 100+ applicants to be part of a team representing the interests of 5000+ students

- Coordinating one of the **largest coding clubs in India** aimed at inspiring students to take up programming
- Conducted workshop on **Game Development** and organized competitions indulging about **100+** participants
- Volunteered to make resources on **Probabilistic Algorithms for Code in Quarantine** and **Algos-Simplified**
- Contributed towards **maintaining** the WnCC **WIKI** by writing articles on **Android Studio**, **MySQL**

MODERATOR | WEB DEVELOPMENT | CAREER CELL | UGAC

[Aug '20 - Sept '20]

- Mentored **300+** students in building a **Personal Website** and developing a **Food Delivery App**
- Prepared weekly tutorials and assignments on **Git**, **HTML**, **CSS**, **Bootstrap**, **JavaScript**, and **Django**

TECHNICAL PROFICIENCY

Languages	C++ C JAVA Python R MATLAB Android Dart JavaScript SQL
Softwares	Git Android Studio ArduinoIDE AutoCAD SolidWorks MIT Scratch
Frameworks/Libraries	CSS Flutter Pandas Scikit-Learn Seaborn Fbprophet Selenium

KEY COURSES UNDERTAKEN

Core	Materials and Technology, Computation Lab*, Thermodynamics of Materials*, Structure of Materials*
Maths and Physics	Calculus, Linear Algebra, Data Analysis and Interpretation*, Quantum Physics and Applications, Basics of Electricity and Magnetism
Interdisciplinary Courses	Engineering Graphics and Drawing, Introduction to Machine Learning(Kaggle), Economics*, Introduction to Electrical and Electronics Circuits*, Computer Programming and Utilization, Biology, Physical Chemistry, Organic and Inorganic Chemistry

**to-be completed by Nov 2020*

EXTRA CURRICULAR ACTIVITIES

- Led a **10 member team**, ideated how to blacklist vehicles that overstep the allowed time inside campus as a part of **Think in the Box General Championship** organized by Electronics and Robotics Club, IITB [2020]
- Bagged **7th** position out of **15k+** participants in the **Virtual Stock Market** competition by ECell,IITB[2020]
- Awarded Certificate of Merit for successful completion of **L^AT_EX** BootCamp under Learners' Space, IITB[2020]
- Coded for a **Surface-Following** drone in **Pluto-X Hackathon**, conducted by Aeromodelling Club, IITB [2019]
- Stood **12th** among **1100+** participants in **Sarcasm**, an online cryptic hunt competition by SARC, IITB[2019]
- Ranked **7th** in Entrepreneurship Buzz competition; pitched a start-up business model for given problem[2019]
- Volunteered for Paathshaala, a social initiative by Abhyuday; interacted with children at Dreamz Home [2019]
- Contributed to the book **The JEE**, one of the **bestseller** books in IIT JEE charts of **Amazon** [2019]
- Made an **MIT Scratch** App in **Scratch Day** organized by the Web and Coding Club, IIT Bombay [2019]
- Organized campaigns like **clothing drive** and **sunday lectures** for the slums and unprivileged children[2017]