

Ajay Choudhury

☎ +91 8017891393 | ✉ ajaycc17@gmail.com | [in linkedin.com/in/ajaycc17](https://www.linkedin.com/in/ajaycc17) | github.com/ajaycc17

EDUCATION

Indian Institute of Science Education and Research, Bhopal <i>BS-MS Dual Degree in Electrical Engineering and Computer Science, Minor in Data Science</i>	2018 – 2023 <i>Grade: 1st Class</i>
Kendriya Vidyalaya No.1 Kanchrapara, West Bengal <i>AISSCE with Physics, Chemistry, Maths and Computer Science</i>	2018 <i>Grade: 86.6%</i>

EXPERIENCE

Frontend Web Developer Live <i>Glazeline Tiles and Ceramic Studio Bhopal</i>	May 2023 – May 2023 <i>Madhya Pradesh, India</i>
<ul style="list-style-type: none">Developed a static web application with catalogues and collections using ReactJS, and Tailwind CSS.Used EmailJS for contact forms and deployed on Netlify.	
Web Development Intern Live <i>EECS Department, Indian Institute of Science Education and Research, Bhopal</i>	June 2022 – September 2022 <i>Madhya Pradesh, India</i>
<ul style="list-style-type: none">Developed the department site from scratch using ReactJS, ExpressJS, NodeJS and MySQL database.Used Google Sheet API to fetch volatile data and added source control using Git and GitHub.Deployed the project using Apache in CentOS server with SSL.	
Teaching Assistant <i>Indian Institute of Science Education and Research, Bhopal</i>	April 2022 – July 2022 <i>Madhya Pradesh, India</i>
<ul style="list-style-type: none">Taught fundamentals of C programming, Linux commands and Data Structures to undergraduates.Assisted a class of 250+ students with coding problems in practical sessions under Dr Shashank Singh.	

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, SQL, R, HTML, CSS.
Frameworks & Libraries: React, Node.js, Express.js, Gatsby.js, Next.js, Django, Tailwind CSS, Bootstrap.
Core Subjects: Data Structures and Algorithms, Operating systems, Computer Networks, DBMS and OOPS.
Developer Tools: Unix/Linux, Git, GitHub, Bash, VS Code, Visual Studio, IntelliJ, Postman.

PROJECTS

Study and Cryptanalysis of BLAKE Hash Function Repository	February 2022 – April 2023
<ul style="list-style-type: none">Analyzed preimage attacks on BLAKE2s and BLAKE-256 hash functions and proposed an improvement in time complexity of a 2-round attack from 2^{224} to 2^{192}.Implemented a preimage attack on 1.5-round of BLAKE and BLAKE2s hash functions in C.Implemented a differential(known plaintext) attack for key recovery from 6-round DES block cipher.	
Land-type classification using Hyperspectral Image	August 2022 – October 2022
<ul style="list-style-type: none">Hyperspectral data with 220 bands from the AVIRIS dataset was used to classify land into five different categories using an unsupervised machine learning algorithm.Due to coarser spatial resolution, the number of dimensions was reduced using principal component analysis (PCA) and KMeans clustering algorithm was used for classification.	
Model for Credit Card Fraud Detection Repository	February 2022 – April 2022
<ul style="list-style-type: none">Developed a novel machine learning model for credit card fraud detection using decision tree classifier with an AUC-ROC score of 91.83% and f-measure of 0.891 after hyper-parameter tuning.Overcame the issue of overfitting due to continuous data in decision tree using cost complexity pruning and grid search techniques.	
Django Web Application Repository	July 2021 – August 2021
<ul style="list-style-type: none">Built a full stack web application having a blog app supporting CRUD operations, native commenting system, an user authentication system and Google OAuth using Django, Python, JavaScript and PostgreSQL.Redesigned the default Django Admin dashboard using Tailwind CSS and deployed the project in Ubuntu server using Gunicorn, Nginx, Git, GitHub and cloud storage(DigitalOcean Spaces) for media.	

EXTRACURRICULAR ACTIVITIES

Web Developer for Chrysalis (Science Council, IISER Bhopal) Live	October 2021 – April 2022
<ul style="list-style-type: none">Built a full-stack web application for the Chrysalis science magazine with blogging, native commenting system, native user authentication, podcast embedding feature from Spotify and content searching.Tech stack used: Django, PostgreSQL, JavaScript, Bootstrap5 and deployed on Heroku using Cloudinary for media files.	