

Pankaj Sharma

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EDUCATION

AUGUST 2015 - AUGUST 2019 | B.E.(Hons.) in Electronics and Instrumentation
Birla Institute of Technology and Science - Pilani, Goa Campus, Goa, India
CGPA: 8.29/10

EXPERIENCE

JULY 2019 - NOW | **Software Engineer, JP Morgan Chase & Co., Mumbai**
Working on converting existing legacy applications to containerized workloads and migrating them from the Private Cloud to Amazon Web Services(AWS EKS). Actively involved in the development of Active Inventory Management (AIM) Cash Optimization based on Signavio BDM that Cash Managers and Portfolio Managers use to actively manage residual cash on client accounts before the close of day. This helped the business optimize operations and invest more than \$1.6 Billion in previously uninvested cash in 2022 alone. The total invested cash volume in 2022 via AIM was \$188 Billion. AIM was recognized as the 'Best Use of IT in Treasury and Capital Markets' by [Informaconnect](#) in December 2022. Previously, worked on updating the authentication and authorization setup across micro-services to use OAuth2. Worked on enhancing the CI/CD pipelines to the latest industry standards. I also worked on Single Page Application Development using ReactJS.

OCTOBER 2019 - SEPTEMBER 2020 | **Full Stack Developer(Volunteer) - The Humsafar Trust | Force for Good | JPMC, Mumbai**
Created a cross-platform application for The Humsafar Trust - An NGO for LGBTQIA+
Developed an application based on Ionic, Cordova, Spring Boot, and MySQL. The app supports Social Feed for LGBTQ Events, adding these events to the calendar & setting reminders and SOS integration with calling and Navigation support that can be used in emergencies. The app also hosts a vast collection of resources ranging from Legal, Medical, and Social support that can help the LGBTQIA+ community in India.

JANUARY 2019 - JUNE 2019 | **Software Development Intern, Retailio, Mumbai**
My role was to develop Frontend functionality for Retailio's web panels for Retailer and Distributor as well as also add functionality to internal ADMIN panel. The work included supporting these with backend API development. I also worked in ERP integration, MIS report generation, and synchronization of OMS payments. Worked on implementing batch jobs that helped reduce manual intervention in Payment Processing. Created UI in AngularJS where users can upload Payment Information in Excel and trigger batch jobs to process the same.

SUMMER 2017 INTERNSHIP | **Research Intern - Forest Research Institute(FRI) | Forest Department | Government of Rajasthan, Jaipur**
Reviewed two ongoing projects as an Intern - Mukhya Mantri Jal Swavlambhan Abhiyan (MJSJA) and Rajasthan Forestry and Biodiversity Project - Phase II. Also, did an Analysis of the R&D department and gauged how various technologies like Quantum Geographic Information System (GIS) and Management Information System (MIS) are being used in the projects. Got an opportunity to visit a Self Help Group (SHG) under Community Mobilization and Joint Forest Management.

PROJECTS

PROJECT, FALL SEMESTER - 2018 | **Application of Index Calculus Method for breaking Cryptosystems**
The discrete logarithm problem is one of the major hard problems used in cryptography. Learned the Index calculus method and then analyzed it thoroughly. The algorithm collects relations among the discrete logarithms of small primes, computes them by a linear algebra procedure, and finally expresses the desired discrete logarithm with respect to the discrete logarithms of small primes. Analyzed its application for breaking Cryptosystems and presented a report on the same.

PROJECT, SPRING SEMESTER - 2018 | **Optimal Controller Design**
An automobile compartment temperature is constantly affected by environmental changes. An air-conditioning system must maintain a comfortable inside temperature despite these changes while operating with minimal fuel consumption. Therefore, an entirely new control procedure is needed to resolve the contradictions of low energy consumption and a pleasant driving climate. Simulated control systems using MATLAB and presented a report on Optimal Controller Design to achieve the same.

PROJECT, FALL SEMESTER - 2017	Light Detecting Fire Alarm Designed an IC 555 timer-based light-sensitive fire alarm. Designed the circuit on PCB and then soldered the components. The simulation was done using high-intensity mobile flashlights.
PROJECT, SPRING SEMESTER - 2017	6164 RAM chip Tester Designed an 8086-based system to test 6164 RAM chips. The tester tested each bit of the RAM individually. Developed the logic and wrote supporting Assembly Language Program. Simulated design and code on Proteus.
PROJECT, FALL SEMESTER - 2016	Design, Simulation and Implementation of an FSM - Parking Vehicle Counter Implemented a Finite State Machine (FSM) to model the number of cars in a parking lot. To achieve this, designed an Algorithmic State Machines (ASM) chart to describe sequential operations. Implemented design on Verilog and simulated using Xilinx ISE Simulator. The physical realization of the model was done using MSI and SSI components.

RELEVANT COURSEWORK/WORKSHOP

MATHS COURSES	Cryptography, Discrete Mathematics, Probability & Statistics
COMPUTER SCIENCE COURSES	Computer Programming, Operating Systems
MOOC COURSES	Machine Learning by Andrew N.G (Stanford University)
WORKSHOP	Certificate in Networking Management Course

TECHNICAL PROFICIENCY

PROGRAMMING LANGUAGES	Java, Groovy, Go, Kotlin, C, C++, Python, Javascript, TypeScript
FRAMEWORKS/TECHNOLOGY	Spring, React, NodeJS, Loopback, ExpressJS, AWS, Terraform, Kubernetes, Oracle, MSSQL Server, Sybase ASE, Docker, Kafka, Spinnaker
CERTIFICATIONS	AWS Certified Cloud Practitioner (CLF)

AWARDS/SCHOLARSHIPS/RECOGNITION/TEST SCORES

AWARDS	'Best Use of IT in Treasury and Capital Markets' by Informaconnect in December 2022
SCHOLARSHIPS	Merit cum Need (MCN) Scholarship, BITS Pilani
RECOGNITION	Best Technology Team of the Quarter, AWM Rewards and Recognition, JPMC
TEST SCORES	GRE - 322 (V-165,Q-167,AWA-4), TOEFL - 113

POSITION OF RESPONSIBILITY

- **Photographer**, Event Organizing Team, JP Morgan Chase & Co., Mumbai
- **Core Committee Member** of the Department of Spree Controls, BITS Goa
- **Teaching Assistant** of the following courses: Technical Report Writing
- **Member** of BITS Genesis - Student Vertical

EXTRA-CURRICULAR/HOBBIES

- Binge Watching, Pop Culture, Passionate about Gadgets, Software, and Technology
- Cricket, Football, Badminton, Basketball, Swimming, Console, and PC Gaming
- Competitive Coding and Programming, Catch the Flag contests, Exploring Steganography
- Developed a Mobile Application to track COVID-19 cases in India as a Side Project using Web Scrapping
- Studied Software defined GPS Receiver using Acquisition, Tracking, and Invigilation

LANGUAGES

- Hindi, English