OMKAR POTE

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Education

Indian Institute of Technology, Madras   **July 2016 – May 2020**
Bachelor of Technology in Chemical Engineering   *Chennai, India*

Technical Skills

Primary Skills: Java Spring Boot, RESTful services, OOP, SOLID principles, System Design, C++, Microservices, Kubernetes

Languages: Java, C/C++, Python, Javascript, Scala, Bash Shell scripting, LaTeX

Big Data: ETL, Spark, Databricks, AWS (EC2, S3, EMR), Hadoop, MySQL, MongoDB, Neo4j

Technologies/Frameworks: Parallel programming, OpenMP, RabbitMQ, Redis, Hibernate, Apache Nifi, Thrift, NewRelic, Camunda, BPMN Workflows, Payment gateways, Junit/Mockito, NodeJS, ReactJS, HTML/CSS

Experience

iACE Lab @ IIT Madras   Oct 2023 – Present
Project Scientist

- Working in the Intelligent Applications in Chemical Engineering (iACE) Lab under Prof. Rajagopalan Srinivasan. Current research focus: XAI in Process Systems Engineering.
- Exploring Interpretable and Explainable AI techniques for multivariate time series classification, in a chemical engineering context.

HILCPS Lab @ IIT Madras   Oct 2023 – Present
Software Consultant

- Concurrently involved with the Human-in-the-Loop Cyber-Physical Systems (HILCPS) Lab, led by Prof. Babji Srinivasan.
- My main responsibility here is to guide the research group on implementing enterprise-level best practices and team values.
- This involves facilitating code reviews and interactive sessions covering various aspects of software engineering, including collaboration, agile methodologies, version control, and code hygiene.

Capillary Technologies   May 2020 – Sep 2023
Software Developer, OTA Payments   *Dec 2021 – Sep 2023*

- Designed and implemented POTATO (Over-The-Air Transactions Orchestrator), a robust and comprehensive solution that facilitates seamless, cashless fuel transactions at gas stations.
- Executed the entire product development process, including constructing a Spring Boot-based microservice and establishing databases using MySQL and MongoDB.
- Crafted highly secure REST APIs for communication with Payment Service Providers and fuel stations.
- The microservice, optimized for performance, leverages RabbitMQ to efficiently handle real-time transactions, accommodating a user load exceeding 10,000 per minute.
- Additionally, took charge of instituting a CI/CD pipeline and implementing real-time monitoring systems to ensure optimal functionality.

Big Data Engineer, Extract, Transform, Load (ETL)   *Oct 2020 – Nov 2021*

- Worked on feature development and optimization for the in-house data warehousing and ETL system which manages Capillary's flagship CRM and BI tool. The system is capable of processing a data inflow of over 6 billion new daily records.
- This ETL process is run using Spark clusters on AWS Elastic Map Reduce (EMR) and includes data cleaning, transformation and the generation of a star schema based model with facts, dimensions and KPIs.

Intern   *May 2020 – Sep 2020*

- Built internal developer tools to handle the ETL process. The ETL queries are generated and stored as a Directed Acyclic Graph in Neo4j. This includes GUI for end-to-end monitoring as well as control of DAG executions on Neo4j and AWS EMR clusters.

Tesco   **May 2019 – Jul 2019**

Software Engineering Intern

- Worked on the Tesco food donation system, automating the process to decrease the human efforts by 40hrs/week per store and analysing the donation data to increase the accuracy/relevance of donations by 15%.

Crest IT Consulting   **Jun 2018 – Jul 2018**

Web Development Intern

- Did a complete rebranding of the company, developing a new website, logo and brand identity. Created email campaigns for marketing for the B2B segment, generating new leads worth upto 80 lakh INR. See crestit.in.

Activities and Projects

Projects

- Yuj (formerly Caval) was an IITM based startup that provided vehicle repair service at doorstep. Worked as a founding team member on the entire branding, logo, website, app and other marketing material.
- Created the ChemClave 2017 website as part of the WebOps team, for the annual event organised by the Chemical Engineering Society (CheS) of IIT Madras.
- Developed a Star Wars themed, open source Chrome extension for productivity. Received a commendation in the FOSS hackathon 2021. See github.com/omkarpote/cuckoo-dooku

Graphic Design

- Skilled in graphic design using the Adobe Suite. (Photoshop, Illustrator, Premiere Pro, Indesign)
- Freelanced for various clients from Dec'16 to Aug'18. Portfolio at behance.net/omkarpote
- Served as the Head of Design, Entrepreneurship Cell, IIT Madras. Led a team of 16 designers and associate designers developing creative content for digital and printed media.
- As part of the organising team of the Inter IIT Sports Meet 2017, designed marketing content, venue setups and ambience for the tournament.

Extracurriculars

- Captain of the Chemical Engineering department football team that finished third place in the IITM Inter Department League 2018-19.
- Black belt in Karate with several accolades and medals on the national level, over 11 years' practice.
- Cleared ABGMVM's Hindustani Classical Music Exam with a 45/50 score.