PRAKHAR RATHI

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SKILLS

- Java | OOPS | JDBC | JPA Hibernate | Python | Groovy | Flutter | JUnit | Mockito | AWS
- Java Spring | Spring Boot | Java OSGi | Java Spring Cloud | Microservices | REST APIs
- MySQL | PostgreSQL | MongoDB | Docker | Kubernetes | GitLab CI | Android | Swift
- HTML | CSS | JavaScript | ReactJS | Fluent English | Intermediate German | Native Hindi

EXPERIENCE

Software Engineer at CS Group *Darmstadt, Germany*

05/2022-Present, *Full-time*

- Developed GSMC-CC for European Space Agency's ground-stations (ESTRACK) to replace the existing monitoring and control software.
- Designed, programmed, and documented various Java OSGi modules on top of EGS-CC.
- Implemented synchronized deployment of GSMC-CC on multiple ESTRACK ground-stations across the world.
- Designed and developed a standalone application to control GSMC-CC on any ESTRACK ground-station on the globe.
- Communicated directly with the clients, formulated user requirements, and maintained respective software design documents.

Projects:

- GSMC-CC: Ground Station Monitoring & Control
- SOGRA: Service-Oriented Ground Stations Network Configuration & Resource Allocation

Tech Stack: Java, Java OSGi, JavaFX, Maven, Groovy, Docker, PostgreSQL, Apache Karaf, ActiveMQ, Kafka, Zookeeper, Grafana, GitLab CI, Shell scripts.

Research Assistant(Software Developer) at Fraunhofer IEM *Paderborn, Germany*
05/2021 - 03/2022, *Part-time*

- Developed a user-centric full-stack web application with the team and containerized the application along with the database following micro service architecture.
- Generalized the deployment process for generating for multiple profile based jars, cutting down the process to a single stage in the Continuous Integration (CI) pipeline.
- Designed, modified, and programmed vulnerabilities in the code and implemented unit tests.

Tech Stack: Java, Python, Spring Boot, Maven, JPA, Hibernate, JDBC, REST API, Docker, MySQL, Thymeleaf, HTML, CSS, Gitlab CI, Shell scripts.

Project Engineer at Wipro Ltd. *Bengaluru, India*
07/2018 - 02/2019, *Full-time*
- Modularized and migrated old SOAP web service to REST API with clean code that is easy to understand, operate, and test.
- Contributed to the design and development of proof-of-concept Android infotainment system to meet client requirements for functionality and performance.

Tech Stack: Java, Python, Spring Boot, JPA, Hibernate, JDBC, REST API, Maven, MySQL, HTML, CSS, JavaScript, Android.

EDUCATION

M.Sc. in Computer Science from Paderborn University *Paderborn, Germany*
10/2019 - 03/2022

Specialization: Software Engineering

Thesis: Automated Cell Header Generation for Machine Learning Jupyter Notebooks at Heinz Nixdorf Institute, Paderborn.
- Extended a Python static analyzer to generate call graphs with cell-sensitive call site identification for Jupyter notebooks, line-sensitive call site identification for Python source files, and external library calls.
- Developed [HeaderGen](#), a unique software to annotate input Jupyter notebook'' code cells with corresponding Machine Learning phases as headers in preceding markdown cells.
- Established a benchmark suite with over 120 Python programs to test the extended static analyzer.
- Fetched Jupyter notebooks from Kaggle programmatically and created another benchmark to assess software performance on real-life notebooks.

Tech Stack: Python, Jupyter Notebooks, LaTex.

B.Tech. in Computer Science and Engineering from Dr. A.P.J. Abul Kalam Technical University *India*
08/2014 - 06/2018
- Built strong fundamentals in Data Structures, Principles of Programming Languages, Relational Database Management Systems, Design and Analysis of Algorithms, etc.
- Participated in IT clubs and contributed to various programming tasks and projects.

PROJECTS

VARobot: Virtual and Augmented Reality Assisted Robot Programming
03/2020 - 03/2021, *Master's group project*
- Programmed an Android app for Robot Programming in AR with the team.
- Designed and developed single-handedly a unique approach of programming a Lego NXT Mindstorm robot by programming an Android plugin for Unity using Java for LeJOS and Android Studio as the backend with high accuracy.

- Contributed to the website development https://varobot-pg.github.io/.

<u>Tech Stack:</u> Java, Python, Unity 3d, Android, LeJOS, HTML, CSS.

Sentiment Analysis of Scraped Consumer Reviews
04/2017 - 13/2018

- Scraped the data related to the searched item from 3 giant e-commerce websites.
- Programmed sentiment analysis script and arranged reviews into 3 categories.
- Contributed to the UI and REST API development.

<u>Tech Stack:</u> Python, HTML, CSS, Scrapy, Beautiful Soup, MongoDB.

TRAININGS AND CERTIFICATIONS

- **Master Microservices with Spring Boot and Spring Cloud**
  01/2024, *Udemy*
- **Software Architecture and Design of Modern Large Scale Systems**
  11/2023, *Udemy*
- **Industrial Training in Java-J2EE**
  07/2017 - 10/2017, *Aptron Solutions Pvt. Ltd., Noida, India*
- **Training in Java-J2EE**
  12/2016 - 04/2017, *Ducat, Noida, India*