ARNAV MAHAPATRA

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MS graduate with 3 years of experience as a Full-Stack Engineer, specializing in Object Oriented Programming using Java with Spring Boot and REST API backends, complemented by expertise in ReactJS and Angular frontends. Proven ability to deliver robust solutions and drive project success. Seeking a dynamic role as a Software Engineer to further contribute and innovate.

TECHNICAL SKILLS

- **Languages –** Java, SQL, Python, R, MATLAB | UI - HTML, CSS, JavaScript, TypeScript.
- **Libraries & Frameworks –** Spring Boot, REST API, Microservices, ReactJS, Angular, Node.js, Express.js, Flask, Spring Security, Apache Kafka, Android Studio, PostgreSQL, Oracle SQL Developer, MongoDB, Hibernate, JPA, JDBC, Elasticsearch, Google Search API, JSP, JSTL, jQuery, Servlets, Bootstrap, Streamlit, Selenium, JUnit, CI/CD on AWS, Jenkins, Ansible, GitHub Actions, Kubernetes, Docker.
- **Other –** MS Office, Visual Studio Code, IntelliJ IDEA, Eclipse, NetBeans, Maven, Git, GitHub, SVN, Hugging Face, Tomcat, JBoss, JIRA.
- **OS –** Windows, Linux.

EDUCATION

Master's in Engineering Science | January 2024
University at Buffalo, The State University of New York, United States of America

- **Coursework:** Introduction to Probability Theory for Data Science, Introduction to Numerical Mathematics for Computing and Data Scientists, Programming and Database Fundamentals for Data Scientists, Statistical Learning and Data Mining I, Statistical Learning and Data Mining II, Introduction to Machine Learning, Data Models Query Language, Computer Vision and Image Processing, Applications of Data Science.

Bachelor of Engineering in Computer Engineering | July 2019
Don Bosco Institute of Technology, Mumbai University, India

- **Coursework:** Data Structures, Object Oriented Programming, Analysis of Algorithms, Database Management Systems, Distributed Databases, Machine Learning, Artificial Intelligence, Data Mining, Image Processing, Computer Graphics, Cloud Computing, Computer Organization and Architecture, Operating Systems, Computer Networks and Network Programming, Network Threats and Attacks, Cryptography and System Security, Mobile Communication and Computing, Business Communication and Ethics.

PROFESSIONAL EXPERIENCE

Data Scientist Intern | May 2023 – August 2023
AI Camp Incorporated, Palo Alto, California, United States of America

- Developed a portfolio of websites for hosting text generation projects, skillfully leveraging Python and Flask for the backend infrastructure. Utilized Bootstrap templates, HTML, CSS, and JavaScript to craft user-friendly front-end interfaces that enhance the overall user experience.
- Acquired proficiency in Large Language Models (LLMs) through LangChain and Haystack frameworks, expanding my skill set to include advanced Natural Language Processing (NLP) techniques relevant to software development projects.
- Leveraged Python's Beautiful Soup and Selenium libraries to gather data from various websites, enhancing data collection and analysis capabilities for the company and utilizing web-based data retrieval expertise to build applications that offer valuable insights and functionality to users.
- Mentorship experience in Python, Flask, and other relevant technologies, allowing me to guide and support colleagues in their software development endeavors.

Java Full-Stack Engineer – Online Exams Development | July 2019 – May 2022
NSEIT Limited, Mumbai, Maharashtra, India

- Mastered back-end development with a focus on Java, leveraging the capabilities of the Spring Boot framework and REST API to construct robust web applications tailored for online examinations.
- Advanced proficiency in ReactJS and Angular frameworks for designing intuitive, lightweight single-page applications. Skilled in front-end languages such as HTML, CSS, JavaScript, and TypeScript to deliver clean, concise user interfaces with a focus on seamless navigation.

- Seasoned Python scripter with a focus on automation, data analysis, and system integration. Proven track record in developing efficient solutions, leveraging Python libraries and frameworks.
- Acquired in-depth SQL expertise by managing large databases on PostgreSQL and Oracle SQL Developer platforms, optimizing CRUD operations and queries for efficient data retrieval and manipulation.
- Proficient in Test-Driven Development (TDD) methodology, leveraging the JUnit framework to ensure robust and high-quality code.
- Designed and implemented a robust CI/CD pipeline on AWS infrastructure, integrating Jenkins, Ansible, and Docker to automate software delivery processes and enhance development efficiency.
- Proficiently utilized Agile principles and Scrum framework within JIRA, orchestrating sprint planning, backlog grooming, and sprint reviews to facilitate transparent and efficient project management.
- Proven ability to express technical concepts in simpler terms for non-technical stakeholders, resulting in smoother project execution and enhanced collaboration across cross-functional teams.

PROJECTS
School Contact Scraper | August 2023
- Created a School Contact Scraper for gathering staff contact details from high schools in major US states using Python libraries such as Beautiful Soup and Selenium, significantly boosting company data capabilities and earning a cash prize for project success.
- Crafted a Streamlit dashboard that seamlessly integrates with MongoDB, allowing for a seamless presentation of web scraping statistics and insights.
- Leveraged Large Language Models (LLMs) not only as robust agents for web scraping but also as proficient tools for processing the gathered data.

Remote Proctored Exams | April 2022
- Architected a Remote Proctoring System on the Spring Boot and ReactJS frameworks, enabling reliable and secure online examinations by confirming candidate identities via webcam verification.
- Implemented object detection algorithms, leveraging OpenCV and Python, to identify unauthorized objects or actions during remote exams. Enhanced cheat detection by analyzing webcam feeds in real-time and flagging suspicious activities.
- Employed data analysis techniques on exam data, using Python and Pandas, to identify patterns indicative of potential cheating behaviors. Conducted statistical analyses to detect anomalies and outliers, enhancing cheat detection accuracy.

Post-Exam MIS | January 2020
- Conceptualized and implemented a Post-Exam MIS portal using Spring Boot and Angular frameworks, centralizing access to all candidate post-exam reports and thereby streamlining client operations.
- Achieved significant reductions in operational costs through the strategic consolidation of post-exam data, simplifying data retrieval and enhancing overall operational efficiency for clients.
- Tailored the MIS portal to provide intuitive navigation and easy-to-understand reporting features, improving client satisfaction and fostering positive business relationships.

RESEARCH EXPERIENCE
Human Heart Disease Prediction Using Data Mining Techniques | December 2019
IEEE International Conference on Advances in Computing, Communication and Control (ICAC3 19), Mumbai, India
- Spearheaded a research initiative resulting in a Flask-based web application in Python that employs ECG-derived attributes to gauge the potential for heart disease.
- Investigated and applied four distinct machine learning algorithms: KNN, Naïve Bayes, Linear SVM, and RBF SVM, delving into the nuances of each for robust predictive modeling.
- Published a comprehensive comparative analysis of the algorithms, evaluating performance metrics like accuracy, sensitivity, specificity, and kappa coefficient to contribute to the field's knowledge base.

CERTIFICATIONS
- **AWS Certified Cloud Practitioner Issued by AWS | January 2023**
- **IBM Certification in Data Science and AI Issued by Learnvista | December 2022**
- **Android Certification Issued by Monkfox | August 2017**