Aswini Sanket Patnaik

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EDUCATION

INSTITUTE OF TECHNICAL EDUCATION AND RESEACH,SOA — **2021-2025**
*B.Tech - Computer Science and Engineering - **CGPA - 10*** — *BHUBANESWAR, ODISHA*

SARASWATI SISHU VIDYA MANDIR,NEELAKANTHA NAGAR — **2019-2021**
*12TH PCMIT,CHSE - **PERCENTAGE - 97.16%*** — *BERHAMPUR, ODISHA*

DAV PUBLIC SCHOOL BERHAMPUR — **2019**
*10TH,CBSE - **PERCENTAGE - 97.20%*** — *BERHAMPUR, ODISHA*

COURSEWORK / SKILLS

- DSA & OOPS
- Servlets
- DBMS
- Devops

PROFESSIONAL EXPERIENCE

Broadridge ↗ — **01/24 – Present**
Software Developer Intern — *HYDERABAD, TELANGANA*

- Developed and implemented scalable API solutions using FastAPI, enhancing application functionality with a focus on performance optimization.
- Researched and integrated JWT technology to enhance security protocols, delivering technical presentations on JWT parsing in Python.
- Designed a regression framework using advanced prompt engineering techniques for gAI applications, generating diverse query variations for AI model training.
- Enhanced data extraction processes through fuzzy matching techniques, improving the precision of RFID document extraction tools.

Highradius ↗ — **06/24 – 08/24**
Cv Tech Intern — *BHUBANESWAR, ODISHA*

- Utilized Putty and SQL YOG for database management and querying.
- Gained experience in the Order-to-Cash cycle, including payment processing, remittance handling, and OCR.
- Worked with ERP systems, Salesforce and understood the BAI file structure for payment and remittance loading.
- Handled cron jobs for automation and linked various data processes to streamline operations.

WORK AT BROADRIDGE

Python Development and Security Enhancements

- Gained foundational and advanced proficiency in Python, focusing on scripting, automation, and comprehensive API development.
- Developed and implemented scalable API solutions using FastAPI, enhancing application functionality with a strong focus on performance optimization and reliability.
- Thoroughly researched and integrated JSON Web Token (JWT) technology to enhance the security protocols within applications.
- Delivered a technical presentation on JWT parsing in Python, explaining the principles and methodologies of JWT integration for secure client-server communications.

Project: Development of GenAI Application's Regression Framework

- **Python, Prompt Engineering**
- **Advanced Prompt Engineering and Diverse Query Generation**
- Designed a framework deploying prompt engineering techniques to produce diverse query variations, pivotal for comprehensive AI model training and evaluation.
- Generated a minimum of 20 unique query variations for each initial query, employing varied vocabulary, syntax, and logical constructs to preserve the intended meaning while enhancing diversity.
- **AI Model Fine-Tuning**
- Fine-tuned the gAI model through iterative testing and feedback incorporation, significantly strengthening its ability to interpret and respond to diverse natural language inputs with precision.
- Optimized model parameters to enhance output accuracy, ensuring logical consistency and maintaining high performance levels.
- **Systematic Evaluation and Baseline Development**
- Conducted rigorous testing of query variations, fostering improvements in the model's adaptability and predictive precision, and contributing to increased overall effectiveness of the AI application.

Project: FundPoint Task Automation and Enhancement

- **Python, Jupyter, AWS, JSON, Fuzzy Matching**
- **Prompt Refinement and JSON Conversion**
- Initially tasked with refining prompts for data point extraction, ensuring alignment with business rules and guidelines.
- Transformed refined prompts into JSON format, enabling seamless integration with existing data processing workflows.
- **AWS Integration and Data Processing**
- Secured AWS sign-in access and connected to the BRCP proxy server, facilitating the execution of Jupyter-based Python programs.
- Undertook thorough testing of data processing code, analyzing and enhancing processes related to post-processing issues.

- **Development of RFID Document Extraction Tool**
- Designed and developed a program to accurately extract sentences from RFID documents using specified start and end offsets.
- Adapted the tool to strip HTML tags, ensuring extracted sentences met data quality standards.
- **Fuzzy Matching and Offset Accuracy**
- Enhanced post-processing code through the application of fuzzy matching techniques, significantly improving the precision of start and end offset determination.
- Experimented with multiple fuzzy matching algorithms to identify optimal methods for increasing data extraction accuracy.

Additional Learning & Development

- **Java Full Stack Training**
- Advanced through comprehensive Java Full Stack development training, broadening development expertise and facilitating professional growth.
- **Collaboration and Reporting**
- Actively engaged in team discussions, reporting progress and insights, and contributing constructively to project development.

PROJECTS

Smart Contact Manager (SCM) ⧉ | Java, Spring Boot,Security,HTML,CSS,Thymeleaf, MySQL — 2023
- Developed a web-based contact management system with secure user authentication and CRUD operations.
- Built user authentication system with Spring Security and implemented CRUD functionality for contact management.
- Designed responsive UI with Thymeleaf templates and created scalable architecture for individual and enterprise use.
- Addressed data centralization and security concerns present in traditional systems.

Banking System ⧉ | Oops,DSA,SQL-Oracle — 2022
- Application to provide banking solution to Banks to manage customer accounts.
- Accounts can be created and manged. Implemented many function related to banking system.
- Operations like deposite and withdrawal can be performed in the account.

Peer-to-Peer Network for Time Synchronization using UDP ⧉ | Socket Programming — 2023
- Developed and implemented a peer-to-peer network connection between three systems (DS, H1, H2).
- DS: Configured as a DayTime Server.
- H1 & H2: Configured as hosts.
- H1 Functionality: Requested and retrieved date and time from the local DayTime Server (DS).
- H2 Functionality: Displayed the retrieved date and time on the console as received from H1.

TECHNICAL SKILLS

Languages: Java, Python, C(beginner), SQL
Frameworks and Libraries: Spring Framework, Spring Boot, Spring Security, FastAPI, Spring Annotations, Dependency Injection, Working of Maven
Developer Tools: VS Code, Eclipse, IntelliJ, Netbeans, Jupyter
Databases: MySQL/SQLYog/Oracle(RDBMS), JDBC
Cloud & Data Processing: AWS, JSON, Fuzzy Matching, Prompt Engineering
Containers & Orchestration: Docker, Kubernetes
Servers & Version control: Apache Tomcat, Github, Gitlab
Networking & Security: TCP/IP, DNS, firewalls, VPNs, JWT

CERTIFICATIONS

* Achieved Certification of Data Structures and Algorithms(Self Paced) using JAVA- GeeksForGeeks
* Achieved Certification of Java Programming Online Course- GeeksForGeeks

EXTRACURRICULAR

* Conducted in-person sessions teaching foundational Java programming and Data Structures & Algorithms (DSA) to students.
* Active member of JAAGO from 2022 to December 2023, contributing to social initiatives and community outreach programs