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SAI KUMAR VANNATI

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PROFILE SUMMARY

- Highly skilled Software Engineer with 5 years of experience in product development using NodeJS and Python. Proficient in problem-solving, with a strong grasp of Data Structures and Algorithms. Recognized for consistent excellence and valuable contributions to the industry. A quick learner, adept at mastering new technologies, and capable of excelling in both team-based and self-directed environments.

EMPLOYMENT

Software Engineer	Virsec Systems India Pvt Ltd	Oct 2021 - present
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VSP Library - Runtime Application Self-Protection(RASP)

- Built a module for instrumenting Node.js applications to prevent attacks at runtime(RASP).
- Instrumented HTTP layer, ExpressJS framework, SQL libraries, Command execution libraries and File System library.
- Implemented Node C/C++ addons using NodeJS native libraries.
- Leveraged Protocol Buffers for efficient inter-process communication, ensuring secure data exchange between various application components.
- Debugged and profiled NodeJS applications for CPU and Memory optimizations.
- Conducted unit testing and ensured code coverage for robust application development.

Framework Discovery Engine

- Developed a Framework Discovery Engine (FDE) service in Python to automatically discover running applications.
- Implemented detection for various application types, including Java applications deployed on Tomcat, Weblogic, etc., Dotnet Framework and Dotnet Core applications, Node.js, Ruby (Puma, Unicorn, Passenger servers), PHP applications deployed on Apache and Nginx.
- Successfully detected process-related details, identified files used to start each process, and determined the directories where processes were launched.
- Utilized Kafka for efficient message production and consumption from other services.
- Integrated Python-watchdog to monitor and handle file events for enhanced functionality.
- Ensured the reliability and quality of the service through thorough unit testing and code coverage.

Software Engineer(Backend)	Bidchat Software Development Pvt. Ltd.	Jun 2018 - Sep 2021
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Grassdoor.com

- Developed robust REST API's for user management, product handling, and checkout functionalities using the Node.js Express framework.
- Leveraged the Sequelize ORM to establish seamless connections with a Relational database (MySQL) for efficient data management.

- Successfully migrated a Legacy E-commerce application to a SAAS platform with a Multi-tenant architecture, optimizing resource utilization across multiple clients.
- Enhanced the routing algorithm responsible for assigning orders to delivery drivers, resulting in a significant reduction of average delivery time to below 45 minutes within the moving warehouse concept.
- Integrated online payment solutions HypurPay and Strong Hold Pay for smooth payment processing during checkout, and a Point of Sale (POS) system to automate card payments upon order completion.
- Utilized Socket IO on the server side to establish real-time communication and push notifications to customers, ensuring prompt updates and a seamless user experience.

EDUCATION

Ponda, Goa

National Institute of Technology, September 2014 - April 2018
Goa

B. Tech in Computer Science and Engineering

Projects:

Feature Selection using Binary PSOGSA and Radial Basis Network with a Novel Fitness Function, NITG

- Main aim of the designed method is to detect disease(Lung Cancer, Diabetes) accurately with a minimum set of features based on data sets from UCI Machine Learning Repository.
- Binary PSOGSA is a bio-inspired machine learning algorithm, combined with Radial basis Neural Network with a novel fitness function for efficient feature selection.
- It helps to choose the best features based on the accuracy obtained from Radial basis neural network
- Novel fitness function is designed in such a way that it ensures a minimum number of features with balanced sensitivity and specificity values.

Internship:

• Event Tracking Software, ECIL Hyderabad

- Android application to track various events that take place in an Organization from time to time.
- Publishers can publish an event in the organization through the app and it pushes a notification to the employees. Employees can accept and register into the event to get notifications.

LANGUAGES AND TECHNOLOGIES

- Node.js, Python
- Hypur Pay, Strong Hold Pay, POS, Stripe
- Express, Google Maps API, Twilio, Socket.io, Kafka, Protocol Buffers
- MySQL, Firebase, Oracle Database, MongoDB(Beginner), Redis
- Git, RabbitMQ

ACHIEVEMENTS

- Published a research paper, "*Feature Selection Using Binary PSOGSA and Radial Basis Network with a Novel Fitness Function*" at 9th ICCCNT conference, 2018