Krishna Vaibhav Yadlapalli

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TECHNICAL SKILLS

Languages : Javascript, Typescript, Python, C/C++, HTML, CSS, Java, Bash

Frameworks : Flask, Node.js, Express.js, Next.js, Angular, Vite Libraries : React, Redux, JWT, Bootstrap, Material UI, Tailwind

Databases : MongoDB, MySQL, PostgreSQL, DynamoDB

Methodology : Agile, Scrum, SOLID Principles, Test-Driven Development(TDD), Microservices

: Amazon Web Services(AWS), GCP, Kubernetes, Docker, IaC, Terraform, CI/CD, Serverless Cloud

Tools : Git, Postman, Jira, MS Office Suite

Fundamentals : Algorithms, Data Structures, Database Design, Operating Systems, Computer Networks

PROFESSIONAL EXPERIENCE

R&D Project Assistant

09/2024 - 12/2024

MYtech Lab in collaboration with Cistel Technologies

Halifax. Canada

- · Developed and implemented a simulation tool to generate synthetic False Data Injection (FDI) attacks for power systems, enhancing the understanding of cyber threats to grid stability.
- Utilized machine learning techniques like Random Oversampling (ROS), SMOTE, SMOTE-ENN, and Adaptive Synthetic Sampling (ADASYN) to create high-quality synthetic datasets for training and validating attack detection models.
- Designed and developed a user interface using Python's PyQt5 framework for researchers to simulate attack scenarios and test detection strategies.
- Enhanced cybersecurity research by exploring novel methods like Multioutput Regression (MOR) for generating stealthy and sparse FDI attack scenarios.

Programmer Analyst

03/2022 - 11/2022

Hyderbad, India

Cognizant Technologies Solutions

- Trained in full-stack web development on React Framework with JavaScript and Bootstrap.
- · Developed dynamic user interfaces with ReactJS, focusing on modular and reusable code components, and promoting collaboration within the development team.
- Designed and managed REST API endpoints to efficiently provide necessary information for the front-end interface, resulting in faster data retrieval times.
- Implemented JSON Web Tokens (JWT) and applied cryptography methods to enhance the application's security, leading to a noticeable decrease in security incidents.

PROJECTS

File Share: Sharing Made Easy | EC2, VPC, DynamoDB, S3, API Gateway, SNS, AWS Backup, React, Bootstrap | 🖸

- · Engineered a cloud-based, real-time collaborative text editor, leveraging IaC, AWS Lambda and EC2 for scalable backend and frontend hosting.
- Utilized CloudFormation for easy deployment reducing setup time by 50%.
- Developed the front end using React, and the back end using Flask supporting over 1,000 users.
- Incorporated AWS API Gateway and Secrets Manager, ensuring robust security and efficient management of sensitive application data.

ActicClass | NodeJS, MongoDB, ReactNative, Bootstrap, JWT, WebSocket's, Geofence, Junit |

- Constructed a cross-platform mobile application that uses GPS to gamify class interactions with attendance tracking System.
- Created the app using React Native for Android and iOS platforms, increasing student participation.
- Created over 150 test cases with over coverage above 90% using Junit.
- Streamlined CI/CD pipelines for the product, accelerating development cycles by 25%.

GoDine: Where Flavor Meets Reservation | Next.js, JavaScript, BootStrap, Go, MongoDB, JWT, Render, Netlify | 🔼 | 📢

- A dynamic Reservation Booking platform, utilizing Next.js and MongoDB, aimed at streamlining the connection between Customer's and Restaurants.
- Participated in the integration of visual analytics into the platform, empowering users with actionable insights and data-driven decision-making tools.
- Engaged in the full spectrum of application workflow management, encompassing front-end interactions, back-end processing, and database operations to ensure efficient performance and scalability.

ACADEMIC EXPERIENCE

Teaching Assistant | Advanced Web Development | Dalhousie University

Sep 2024

- Led over 10 interactive labs, guiding students through hands-on implementation of **Agile development**, **Test-Driven Development (TDD)**, and **Software Development Lifecycle (SDLC)** principles.
- Resolved 200+ technical queries, providing insights into **full-stack development** using technologies like JavaScript, React, and Node.js, as well as **version control** with Git.
- Evaluated and provided feedback on student projects, emphasizing the use of **design patterns**, **SOLID principles**, and clean coding practices to prepare students for real-world engineering challenges.
- Introduced students to DevOps practices such as CI/CD pipelines and version control tools, aligning with industry standards for software development.

Research Assistant | Dalhousie University

Feb 2024

- Conducted advanced research in developing **scalable**, **cloud-native applications** using **microservices architecture** to enhance system performance, reliability, and maintainability.
- Explored cutting-edge AI/ML models and integrated them into application workflows for intelligent decision-making, enhancing user experience with personalized recommendations.
- Utilized **containerization** and **orchestration tools** such as **Docker** and **Kubernetes** to deploy and manage distributed systems, ensuring scalability and seamless operation across environments.
- Pioneered research on implementing **serverless computing** with **AWS Lambda** and **Google Cloud Functions**, reducing infrastructure costs by 40% while maintaining high system availability.
- Developed a robust **CI/CD pipeline** using **Jenkins** and **Terraform**, automating code integration, testing, and deployment to improve software delivery efficiency by 30%.

EDUCATION

Dalhousie University

09/2023 - 12/2024

Master of Applied Computer Science

Chandigarh University, India

06/2018 - 04/2022

Bachelor of Engineering in Computer Science (Hons.) Information Security

CERTIFICATIONS

Security Intelligence Engineer – Explorer Award (IBM) - Recognized for outstanding contributions in security intelligence, demonstrating expertise in identifying and mitigating security threats.

ServiceNow Certified Administrator - Attained a fundamental understanding of AI and machine learning principles within the Azure ecosystem, laying a solid foundation for developing and implementing innovative AI solutions in diverse industry settings.

Cybersecurity Roles, Processes & Operating System Security (IBM) - Gained comprehensive knowledge of cybersecurity roles, processes, and operating system security, enhancing skills in safeguarding digital assets.

Certification of Splunk Fundamentals (by Splunk Official) - Achieved certification in ServiceNow administration, mastering the configuration, implementation, and maintenance of ServiceNow platforms.

Python Data Structures from the University of Michigan (by Coursera) - Gained expertise in Python data structures, enabling efficient data manipulation and analysis for various applications.

Java Programming: Solving Problems with Software from Duke University (by Coursera) - Enhanced problem-solving skills through Java programming, applying software development principles to create efficient solutions.