Vishnu Vuggepalli

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Education

- **Arizona State University** GPA : 3.73/4
  Master of Science in Computer Science (Aug 2022 - May 2024) Summa Cum Laude
- **Geethanjali College of Engineering and Technology** GPA : 3.50/4
  Bachelor of Technology in Computer Science and Engineering (Sept 2017 - July 2021) Magna Cum Laude

Skills Summary

- **Languages and Frameworks**: Python, Java, C#, .net Framework, .net Core, SQL, Angular, React, Node js, Typescript, SpringBoot, Git, Ubuntu, Tableau, Jenkins, JavaScript, C++, C, PLSQL, OracleSOA, PHP, PySpark, Scala
- **Tools, Platforms and Technologies**: AWS, Azure, Agile, Docker, Kubernetes, React Native, MySQL, SQLite, MongoDB, Firebase, AWS SQS and S3 Buckets, JIRA, Android, Confluence, Service now, Apache, Entity Framework, LINQ, UNIX, XML, Workday, HTML/CSS, Web Services - REST, SOAP, APIc, Postman, PostgreSQL, Java Spring, Ruby on Rails

Professional Experience

- **Sensorimotor Control Laboratory, UMBC** Nov 2022 - Present
  Volunteer Researcher *Remote, USA*
  - : Coordinated research on Absolute Pitch in Music and Substance Use Disorder, exploring the correlation between absolute pitch perception and brain activity by Decoupling components and enabled asynchronous communication
  - : Researched in the investigation of BCI, its impact on dopamine levels and brain function. Achieved a significant 60% increase in understanding neural responses to music stimuli Utilized data science methodologies to develop and implement models for verifying and validating absolute pitch functioning. Employed Authentication, Data Flow, Caching, Scaling, Load Balancing
  - : Achieved a 25% increase in data-driven insights and experimental validation. Elevated the understanding of absolute pitch perception, demonstrating a tangible 15% improvement in the overall research output. Created and integrated a web application utilizing Python, JavaScript, Django, and PostgreSQL to monitor the health and operations of over 4,000 client systems.
  - : Data cleaning and ETL (Extract, Transform, Load) procedures were successfully completed for over 10 clients using Python on Databricks, resulting in high-quality, usable insights with a 98% decrease in mistakes and missing information.
- **Accenture** Sept 2021 - Jul 2022
  Application Developer(.net)
  - : Sped up Internal Application development with C# and Angular, integrating RESTful APIs for smooth frontend-backend interaction. Enhanced API response time by 34% via a NodeJS and AWS-based model deployment framework.
  - : Spearheaded the implementation of comprehensive unit tests and end-to-end test suites for critical components, leading to a remarkable 70% reduction in client-reported bugs and enhancing overall code quality by 60%.
  - : Leveraged .net to develop robust applications, optimizing API response times by 33% through performance enhancements. Successfully migrated 15 AWS queue consumers and 3 Web APIs from .net 3.1 to .net 6.0 within an AWS-hosted Kubernetes cluster, supporting high-volume mortgage closings. Used Open-Closed Principle (OCP) to add new functionality in preventing regression bugs and makes the system more flexible and maintainable. Managed a Generation level Garbage Collection Streams
  - : Interacted with internal departments to create a data pipeline connecting different data sources and APIs to our PostgreSQL database attaining an accuracy of approximately 10% on out-of-distribution data.
  - : Orchestrated the seamless integration of client-side functionalities using JavaScript, jQuery, and HTML within the .net environment, resulting in a 65% enhancement in application responsiveness and a 50% reduction in page load times, significantly improving user satisfaction.Provisioned Amazon S3 buckets to store 100+ input images and service responses.
- **DXC Technology** Feb 2021 - Aug 2021
  Associate Professional Product Developer
  - : Adeptly provided Tier 2 operational support to information systems using programming languages (including COBOL, .net, and C#), database queries, and SQL. Real-time connectivity with the Jenkins API enabled, giving users with live build statuses, historical build records, integration and build test results, and pertinent information to help them make better decisions.
  - : Revamped the database architecture by optimizing SQL queries and integrating Entity Framework, resulting in a 55% increase in database performance and a 70% improvement in data retrieval efficiency, ultimately enhancing user experience.

Projects and Publications and Certifications

- **Cloud-based Facial Recognition Application** Sept 2023
  Designed and developed an auto-scaling web tier of AWS PaaS-based facial recognition service using Python Boto3,achieving a latency of 100-150ms enabling parallel processing using Amazon SQS queues..Implemented AWS Lambda functions to execute the recognition model and fetch data from Amazon DynamoDB tables
- **Pipeline Management and Analysis** July 2022
  Pioneered the implementation of GitHub-based Continuous Integration/Continuous Deployment (CI/CD) pipeline, the architecture of an end-to-end trading system, highlighting the flow of data from real-time market feeds and internal systems through Kafka and Delta Lake to analytics tools like Looker and Tableau, as well as machine learning development with MLflow for tasks such as Value at Risk and anomaly detection.
- **AWS Certified Developer Associate, Azure Data Engineer Associate, Certified ScrumMaster (CSM), Databricks Certified Professional Data Scientist,Oracle SQL Certification**: April 2024
- **Driver Fatigue Detection and Visual Awareness Application**: Citation - V. Vishnu, P. Prasada, and V. K. Praneetha, "Driver Fatigue Detection and Visual Awareness Application", IJRESM, vol. 4, no. 10, pp. 152–153, Nov. 2021.