Ganesan Santhanam

Software Developer/ Software Engineer

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Summary

With 4 years of hands-on experience and a Master's degree from the University of Florida, I specialize in designing and implementing scalable, high performance applications. Proficient in C#, Python, and JavaScript, I deliver robust software solutions. My expertise includes microservices architecture and cloud solutions, ensuring seamless integration and deployment. Adept at collaborating with cross-functional teams, I am a focused, career-driven, and curious individual, striving for innovation and excellence in software architecture and development.

Skills

Frontend

React.js, AngularJS, Bootstrap, jQuery, HTML, CSS, JavaScript

Backend

NodeJS, Express.js, Django, Python, C#, VB.NET, .NET

Databases and Analysis

PostgreSQL, Microsoft SQL Server, Oracle, MongoDB, Cassandra, Redis, Redis SQL (including use of CTEs and subqueries), Tableau, Data Analysis

Cloud

Amazon Web Services (AWS), Microsoft Azure, Azure Blob Storage, AWS S3

Others

Google Vision API, Apache Kafka, Elasticsearch, RESTful, GraphQL, Git, GitHub, Twilio

Experience

Maxil Technology Solutions | Software Developer
Oak Brook, IL, USA | May 2024 - Present

- Engineered a resume-building feature with AngularJS and SQL Server, enabling users to generate and customize resumes with a 60% faster completion rate.
- Designed a dynamic learning system using AngularJS, MongoDB, and OpenAI APIs, delivering personalized daily quizzes and updated content, increasing user engagement by 75% and skill development by 50%.
- Automated analytics with Tableau, reducing report generation time by 90% and improving data accuracy by 40% through real-time dashboards for engagement and applicant insights.

BestRx Pharmacy Software | Software Developer
Oak Brook, IL, USA | Aug 2023 - Apr 2024

- Built an automated insurance claims system, reducing manual processing by 50%, improving claims accuracy by 35%, and increasing operational efficiency by 25%.
- Implemented a lookup screen to track request history and view incoming transfer requests for prescriptions, enhancing efficiency by 40%.
- **Enhanced data analysis** by optimizing SQL queries and developing Python services, increasing reporting accuracy by 50%, thus impacting report generation.

University of Florida | Data Management Analyst (Level 2)
Gainesville, FL, USA | Jun 2023- Aug 2023

- Architected a React and TypeScript dashboard for longitudinal data visualization, boosting research efficiency by 80% and enabling strategic decision-making.
- Implemented automated alerts using Twilio, significantly increasing participation and response rates by 210%.
- Utilized SQL and Python for in-depth data analysis, delivering clear and actionable insights for research projects and improving overall data-driven decision-making.

Autoreview.ai | Software and Machine Learning Engineer Intern
Gainesville, FL, USA | May 2022 - Dec 2022

- Developed an automated document versioning system with Azure Blob Storage and Django, reducing versioning errors by 50%.
- Implemented document history tracking with Node.js and MongoDB, improving audit trail accuracy by 40%.
- Architected microservices with Node.js and Django for conflict resolution and workflow management, boosting efficiency by 40% and reducing resolution time by 50%.
- Designed an API integrating Google Vision, TensorFlow R-CNN, and GloVe NLP, increasing keyword extraction accuracy by 94% and ensuring compliance.

University of Florida | Graduate Assistant
Gainesville, FL, USA | Apr 2022 - May 2022

- Engineered APIs for payment processing and user-license management using Node.js, Express, and MongoDB, integrating Stripe as the payment gateway, increasing revenue and catalyzing stakeholder engagement.
- Implemented secure authentication with JWT, enhancing system security and customer acquisition.

Infosys | Senior System and System Engineer
Chennai, TN, India | Jul 2018 - Jul 2021

- Redesigned system architecture using domain-driven design (DDD) and dependency injection in .NET, decreasing response times by 40%, improving code readability by 30%, and reducing endpoint testing time by 50%.
- Resolved SQL Server slowness by implementing asynchronous processing and caching in .NET, reducing database load by 50% and improving performance by 40%.
- Migrated 118+ SSRS reports to Power BI and transferred data from SQL Server 2005 and Oracle to SQL Server 2017, enhancing reporting efficiency and demonstrating advanced SQL Server Analytics proficiency.

Education

University of Florida | 2021 - 2023
Computer Science, M. Sc. | 3.61 / 4.00

SRM Insitute of Science and Technology | 2014 -2018
Computer Science, B. Tech | 8.84 / 10.00

Projects

Simple Reddit
Jan 2022– Apr 2022

Optimized API by implementing periodic rating functions for user profiles, posts, and comments, reducing MongoDB database polling. Enhanced image and file handler utilizing better image compression, resulting in a 2x improvement in API response time.

MongoDB, Data Pipeline, REST API, Golang, UI/UX

Super Resolution
Jan 2022– Apr 2022

Authored a robust metric, perceptual acceptance score to evaluate SRGAN, SRCNN, and ESPCN models using a custom loss function and uniform architecture, trained over 20-100 epochs on a 50K dataset. Integrated a preprocessing layer to improve model validity, reducing errors and increasing accuracy by analyzing programmable and non-programmable factors.

Tensorflow, Python, Databases

Cache Simulator
Jan 2022– Apr 2022

Created a cache system simulator analyzing the performance of LFU, LRU, and LPSU policies varying the parameters such as file size(10-1000MB), user traffic(10-60K), bandwidth, and cache space. The simulator collected data and enabled users to access simulation snapshots via custom command-line queries showing 12% in efficient cache handling.

Python, Async Programming, Simulations, Google Colab GPU

Compiler
Aug 2021 – Dec 2021

Constructed grammar rules that follow prominent OOPS-based statically typical language, built a compiler from scratch that analyses, and generates byte code, retaining productivity and performance to nearly 85-93% with O (N3) parser.

Java, Threading, Machine Code, JUnit, Testing, Design

Soft Assistant (Road Safety)
Jan 2018 – May 2018

ArchitectedaCNN-LSTMbasedcomputervision model with 99% accuracy for entity recognition, incorporated Raspberry PI for real-time notifications to alert drivers of proximal pedestrians, utilizing OpenCV, Neural Network, and embedded C programming.

Python, Design, Arduino, Tensorflow, Async Programming