Vedant Vohra 🔗 🔗 🔗

Software Engineer

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Profile Summary

- Software Engineer experienced in building and deploying full-stack solutions and designing cloud-native architectures from scratch.
- Well-versed in *Object-Oriented Programming, Data Structures & Algorithms, Machine Learning, Computer Vision, Natural Language Processing, Cloud Computing, Big Data Analytics, Blockchain Development, and Game Development*.
- Full-stack developer with a strong command of programming languages including *Python, JavaScript/TypeScript, C#, Java, Go, and PHP*. Proficient in designing UIs with *Angular*, writing server-side code and building APIs, and manipulating *SQL & NoSQL* databases. Solid understanding of *Authentication, Security, and version control*.
- Avid learner with a strong technical curiosity, passionate about cutting-edge technology and always striving to learn new skills. Flexible and adaptable mindset, open to new ideas, and willing to respond rapidly and positively to change.
- Engaged collaborator with strong interpersonal skills, able to influence and align multiple teams with conflicting priorities to drive progress under aggressive time constraints.
- Ability to effectively navigate ambiguity, complexity, and change when stakes and pressure are high, and lead without authority to overcome obstacles and ensure delivery.

Education

University of Houston 🔗
M.S. in Computer Science
Houston, TX, 2021-2023

Keshav Memorial Institute of Technology 🔗
B.Tech. in Computer Science
Hyderabad, India, 2014-2018

Languages

English: Fluent   **Hindi**: Native

Technical skills

Languages: Python, JavaScript/TypeScript, C#, Java, Go, PHP
Frameworks & Libraries: **Python**: Flask, TensorFlow, PyTorch, PySpark / **JavaScript**: NodeJS, Angular, JQuery / **C#**: .NET, Unity
Databases: **SQL**: MySQL, SQLite3, Amazon RDS /
NoSQL: MongoDB, Neo4J, ElasticSearch, Redis, DynamoDB
Dev Tools: Git, Jest
Cloud & DevOps: Microservice Architecture, AWS, Linux, Docker, Kubernetes
Project Management: Jira

Professional Experience

Slalom Build 🔗 Software Engineer (intern)   **Houston, TX** Jun. 2022 - Aug. 2022

- Contributed to the software development lifecycle of a software consulting company by designing and implementing features for internal services, delivering clean and scalable code in *TypeScript*, and leveraging web technologies.
- Collaborated within a pluridisciplinary team including Data Engineers, Software Engineers, and the leadership team, maintaining close communication and asking calibrated questions to remove bottlenecks and reach alignment.
- Thoroughly assessed and defined technical requirements, to design a system architecture optimized for speed and scalability, with clarity on time, cost, and impact. Proactively sought performance improvement opportunities with a well-defined profiling approach to isolate and clear bottlenecks.
- Delivered technical presentations, including at the monthly Architecture Collaboration meeting with an average audience of 100, to showcase new designs, features, and development plans. Maintained a high engagement in conversations, asking calibrated questions to reach alignment and optimize for delivery.

Key Deliveries:

- Developed a serverless API for ***Meaningful Work***, a Slack chatbot application allowing employees to provide feedback on their work, and collect data used to measure employee satisfaction. Utilized a myriad of technologies including *TypeScript* as a language, and *Node.js* for server-side logic, in combination with *DynamoDB, Lex, Lambda, SQS, EventBridge, and CloudFormation*. The app launched successfully and reached over 13,000 users.

Darwinbox 🔗

Senior Software Engineer   **Hyderabad, India** Mar. 2018 - Oct. 2020

- Participated in the technical effort of an HR Management SaaS company, reporting directly to the CTO and spearheading the development of cutting-edge, scalable architecture solutions using the latest technologies and platforms, ensuring optimal performance and efficiency. Joined at an early stage and supported the scaling of the business to serve the enterprise market.
- Within high-profile projects, managed multiple modules and deliverables as the sole owner, maintaining a high level of quality and attention to detail, resulting in streamlined processes and improved productivity.
- Collaborated with cross-functional teams including Product, Operations, in addition to Design, Data Science, DevOps, and Customer Success teams to design and implement new features, enhance usability, and improve performance, driving rapid and continuous improvement.

- Evaluated technical requirements and researched adequate technologies, analyzing benefits and drawbacks in terms of scalability and sustainability, and aiming at avoiding future technical debt.
- Demonstrated distinguished leadership skills, provided mentorship and guidance as team lead, fostering a collaborative and productive environment, and driving high team performance and cohesion.
- Pivotal in architecture and design, conducted comprehensive code reviews and review meetings, providing valuable feedback and driving consistent improvements in application quality, resulting in a 50% increase in application responsiveness and a 40% decrease in cloud compute & database costs.
- Strengthened application security as lead developer on the AppSec team, identifying vulnerabilities, developing effective security protocols, and ensuring compliance with industry standards and best practices, improving both application security and compliance.
- Spearheaded pioneering solutions as R&D Lead, which provided the company with a significant competitive advantage and revenue boost, and garnered industry recognition and accolades after demonstrations at TechHR, the largest HR tech conference in Asia, for 2 consecutive years.
- Owned the product's flagship module, PMS, delivering timely and high-quality features and a module overhaul, resulting in a 300% increase in module usage.
- Engage with the leadership team to provide expertise on the latest best practice & cloud technologies and advise on potential process improvement.

Key Deliveries:
- Owned the **PMS (Performance Management System) module** and was responsible for all development within the module, using *PHP (Yii), JQuery, MongoDB, MySQL, Redis, ElasticSearch, and S3*, resulting in an improvement in performance management and employee productivity.
- **Reports module:** Led a team of developers to build a performant, service-oriented framework using *NodeJS, MongoDB, Redis, Angular, SQS, S3, and ElasticSearch* for processing and generating real-time reports, achieving faster report generation and improved decision-making in the organization.
- **Analytics module:** Built a highly scalable backend framework using *Yii, NodeJS, MongoDB, Angular, and SQS* to deliver on-demand data to a powerful visual analytics engine, delivering an increase in the efficiency of data delivery and analysis.
- **Application Security:** Worked on application security, identifying and patching vulnerabilities, establishing security best practices, and addressing client concerns to ensure application security and compliance, resulting in a reduction in security incidents and increased client trust.
- Built a **contactless biometric attendance system** using *NodeJS, Lambda, MongoDB, DynamoDB, Rekognition, S3, Python, Keras, OpenCV, and NumPy,* with an API to integrate face recognition into any module in the application, which improved the attendance tracking system significantly, offering a reduction in attendance errors and manual intervention.
- **ID Document and Receipt Parser:** Worked alongside an external resource to build an OCR-based engine to scan and parse relevant data from ID documents and various types of receipts and invoices, built as a scalable microservice with 2 components, Training, and Parsing, using *Python, R, (Shiny), Tensorflow, and Tesseract*, which improved the organization's operational efficiency and reduced the time taken for manual data entry.

Software Engineer (intern)   **Hyderabad, India** Jan. 2018 - Mar. 2018
- Responsible for the development, management, and maintenance of complex solutions with a focus on delivering optimal efficiency, productivity, and quality.
- Created clear, concise, and user-friendly documentation, and wrote & maintained clean and legible code with comments for others to read, understand and collaborate easily.
- Shadowed Senior Engineers, seeking opportunities to contribute while observing their work to learn best practices.

Key Deliveries:
- Built and integrated an **intelligent voicebot assistant** into the Darwinbox Android app using *DialogFlow, Go, Python, NLTK, and the RASA NLU* pipeline, employing a lightweight API server and a custom RASA NLU intent classification model, increasing user satisfaction and reducing support queries.
- Developed a data-providing **web crawler and scraper** based on js-crawler for the voicebot, utilizing *NodeJS, JQuery, and webpack* technologies, leading to an improvement in training data quality and a 50% increase in voicebot accuracy.
- Established a *Python, NLTK, and SciKit-Learn*-based **profanity filter** and **sentiment analyzer** for employee feedback using Sentiment Classification and SentiWordNet dataset, contributing to a decrease in negative feedback and contributing to the further development of a positive workplace culture.
- Collaborated on a receipt parsing **OCR engine**, utilizing *Python, OpenCV, and Tesseract* technologies, which led to an increase in parsing accuracy and a reduction in manual data entry errors.
- Designed **event registration forms** and email templates for a tech event and blog with *HTML5, CSS3, and JQuery* technologies, which brought an increase in event sign-ups and an improvement in email open rates.

GGK Tech ⧉ Software Engineer (intern)   **Hyderabad, India** Oct. 2017 - Dec. 2017
- Completed comprehensive training program in *C# and .NET* development, acquiring in-depth knowledge of production-scale development practices.

- Collaborated with experienced developers to design and implement complex features, gaining practical experience in problem-solving and critical thinking.
- Demonstrated ability to write efficient, reliable, and maintainable code, contributing to the overall quality of the codebase.

Projects Experience

Gumo ↗
Apr. 2021
- Engineered a web-crawler and scraper using *NodeJS, MongoDB, Elasticsearch, and Neo4J* from a family of nested dynamic web pages.
- Launched and ranked as one of the Top 10 web crawling packages on npm, with an estimated 2000+ users utilizing the package in knowledge mining applications.

SmartCities-Project-1 ↗
Dec. 2021
- Implemented and deployed a cutting-edge technology solution that leveraged *Python, OpenCV, and TensorFlow* to deliver UAV Tracking for Smart Cities, complete with advanced features like Pedestrian detection, re-identification, and tracking capabilities, all of which were meticulously trained on the P-DESTRE dataset.

Camera-based Heart Rate Measurement in the Cloud ↗
May 2022
- Implemented a heart rate estimation system with *Python, OpenCV, and AWS*, as well as a webcam, and enhanced capabilities by leveraging cloud technologies to accommodate multiple concurrent measurements, thereby significantly impacting the field of non-invasive cardiovascular monitoring.

Purgatorio ↗
May 2023
- Developed a game using *Unity and C#*. In this action-packed rogue-like adventure, battle your way through purgatory to defeat the seven deadly sins as you face intense boss fights and pick up powerful weapons along the way. But beware - there are no saves, so you'll need to conquer the game in one go!

Publications

Tech@Darwinbox A Glimpse Under the Hood of Face Recognition at Darwinbox ↗
Nov. 2020

Redacted and published a walkthrough of the implementation of Face Recognition in the Darwinbox mobile application.

Leadership Activities

KMIT AI Club Student Mentor
2017 - 2018