Rachit Khandelwal

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EDUCATION

University of Michigan — Bachelor of Engineering in Computer Science   Ann Arbor, MI
GPA: 3.9 — Activities: Atlas Digital (tech consulting), Enactus Entrepreneurship   *Sept. 2021 – Aug. 2024*
- **Relevant Coursework:** Web Systems, Data Structures and Algorithms, Computer Security, Artificial Intelligence, Programming Languages/Paradigms, Discrete Math, Mobile Application Development, Data Analytics & Analysis

TECHNICAL SKILLS

Languages: Python, JavaScript, Kotlin, C, C++, SQL, HTML, CSS, Swift, Java, C#
Frameworks: AWS, GCP, RDS, Android Studio, LATEX, Figma, Firebase, Next.js, React, Redux, Node.js, PostgreSQL
Tools: Git, Docker, Kubernetes, Postgres, Firebase, MongoDB, Kafka, GraphQL, Unity, Redis
Libraries: PyTorch, NumPy, TensorFlow, pandas, matplotlib, scikit-learn, seaborn
Certifications: Coursera Deep Learning Specialization

EXPERIENCE

PayPal   May 2024 – August 2024
Software Engineer Intern
- Orchestrated the technical merge of developer documentation tooling with several new features, such as language-agnostic server-side SDKs for over 8 languages and an AI code copilot, increasing downloads in the updated portal by over 160%.
- Developed a Jenkins pipeline to deploy API specifications from over 10 internal orgs through APImatic's Cloud API, deploying updates directly to CDN and webserver, enhancing deployment speed by 50% and reducing downtime by 30%
- Engineered a robust front-end portal utilizing React for dynamic rendering and GraphQL for efficient data fetching, tested using Cypress and Mocha with A/B testing by over 1,200 active users, resulting in a 25% uplift in daily user engagement.

Ford   May 2023 – August 2023
Software Engineer Intern
- Migrated 5 broadcast and communication microservices from Pivotal Cloud Foundry redis cache to Google Cloud Platform, improving scalability and leveraging real-time cloud-native services for enhanced performance and reliability.
- Communicated with over 10 databases, utilizing RabbitMQ for seamless database amendment requests, for over 200,000 orders, performing conclusive validation on each, resulting in improved data integrity and increased speeds of up to 2x.
- Modernized SOAP-based software architecture to RESTful API microservices, adding authentication security, Jacoco and Cucumber testing, and utilizing modern frameworks like Springboot, resulting in improved system performance by 40%.
- Leveraged CI/CD Tekton pipeline for seamless deployment to preprod environments, ensuring efficient software delivery and integrating 42Crunch into development workflow for comprehensive security assessments and reliability.

Cantoo   Jan 2023 – April 2023
Python Development Analyst
- Built back-end software for real-time behavioral interview analysis, incorporating facial emotion tracking and sentiment analysis using the Facial Expression Recognizer library and DeepGram API.
- Optimized user-facing video processing delays by 80% through techniques such as down-sampling and frame- skipping, while rendering content dynamically through client-side multithreading, leading to a 50% reduction in loading times.
- Integrated facial expression recognition and speech-to-text conversion into the web app, enabling over a 1,000 monthly active users to receive instant feedback on expressions and analyze speech content for improved interview preparation.

PROJECTS

- **AI/ML Strategy Developer, Operátor ICT, Prague**   *Jan 2024 – May 2024*
  - Formulated ML strategy aimed at enhancing urban green spaces across Prague utilizing Scikit-Learn, TensorFlow to analyze environmental data and identify optimal locations for green space development.
  - Integrated complex datasets on air quality, precipitation, and vegetation from active city sensors to create models that forecast the environmental impact of potential green projects.

- **InstaClone**   *June 2023 – July 2023*
  - Designed full-stack social media web app for shortform video and launched beta with A/B testing on over 20 users
  - Engineered a RESTful API with robust security measures, including user authentication, data encryption, and protection against common web vulnerabilities, while using client-side dynamic pages.

- **SoleFinder**   *May 2022 – August 2022*
  - Implemented an efficient backend system for generating, storing, and retrieving routes for 65 UofM Track athletes.
  - Utilized Google Maps API to ensure seamless data transfer via JSON, leveraging Amazon RDS for persistent storage.
  - Developed API endpoints for iOS and Android platforms, incorporating geocoding and distance matrix API to calculate distances and travel times based on user preferences/history, empowering athletes to analyze routes and performance.