Dhrumil Ankola

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SUMMARY

Full-stack software engineer with expertise in building scalable, AI-driven applications and optimizing large-scale system integrations. Proficient in React.js, Node.js, Python, and MySQL, with hands-on experience in frameworks like Django and advanced machine learning tools such as TensorFlow, PyTorch, and Retrieval-Augmented Generation (RAG). Recognized for delivering robust, user-centric solutions through strong collaboration, problem-solving skills, and a focus on cutting-edge AI, distributed systems, and scalable architectures.

EDUCATION

University of California, Riverside
Master of Science in Computer Science (GPA: 3.7)   *12/2024*
Relevant Courseworks: Big Data Management, Spatial Computing, Advanced Operating Systems, Design and Analysis of Algorithms, Advanced Database Management, Network Routing and Security, Machine Learning, Information Retrieval, Artificial Intelligence, Data Mining

BVM Engineering College, Anand, India *(GPA: 3.8)*
B.Tech in Information Technology   *07/2023*

SKILLS

Languages & Databases: Python, C/C++, JavaScript, MySQL, NoSQL, MongoDB, AsterixDB, Firebase, Vector Databases (ChromaDB)
Web & Mobile Development: HTML, CSS, Tailwind CSS, React.js, React Native, Framer Motion
Frameworks & Libraries: Node.js, Express, Django, Laravel
Architectures & Development: Distributed Systems, Scalable Application Development, Microservice Architecture, Serverless Architecture, REST APIs, API Development and Integration
Cloud & DevOps: AWS (EC2, S3, RDS, Glue, Redshift), Docker, Jenkins, CI/CD, Git, Version Control (GitHub, Bitbucket)
Machine Learning & AI: TensorFlow, PyTorch, BERT, Llama3, Fine-Tuning LLMs, NLP, Graph Neural Networks, RAG
Data Processing & Visualization: PySpark, Airflow, Tableau, PowerBI
Testing & Debugging: Application Testing, Unit Testing (PyTest, Mocha), Automated Testing (Selenium), Debugging and Troubleshooting
Security: Security Best Practices (JWT, OAuth 2.0)
Project Management: Jira, Agile Methodologies (Scrum, Kanban)

WORK EXPERIENCE

CE-CERT, UC RIVERSIDE   Riverside, CA
Assistant Software Developer   *07/2024 - Present*
- Designed and implemented a data-driven dashboard using React.js and TailwindCSS, integrated Calendly API for automated scheduling, and developed scalable backend services in Laravel, reducing notification response times by 30 minutes based on user feedback
- Optimized data retrieval workflows through MySQL queries and AWS S3 configurations, achieving 25% improvement in performance for high-volume inspection tasks
- Enhanced user engagement by 20% through automated communication workflows and led Agile sprint planning via JIRA, ensuring timely and high-quality feature rollouts

Big-Data Lab, UC Riverside   Riverside, CA
Student Researcher   *09/2024 - Present*
- Developing PyAsterix, a Python package designed to simplify access to AsterixDB, a big data management system, streamlining both synchronous and asynchronous interactions to achieve 40% reduction in development time
- Strategizing open-source release to empower developers with an intuitive toolset for query execution, large-scale dataset management, and seamless AsterixDB integration into Python workflows

Devtown   Bengaluru, India
Machine Learning Intern   *05/2022 - 10/2022*
- Engineered a recommendation engine for a cinema platform using React.js, Node.js, and Express, leveraging cosine similarity and Graph Neural Networks to achieve 60% improvement in recommendation accuracy
- Developed 10+ reusable modules, improving development efficiency by 30% and enhancing system scalability for future features
- Boosted user retention by 40% through personalized recommendations, targeted content strategies, and optimized UI design, resulting in increased engagement and revenue growth

PROJECTS

CreateFlow - CalHacks 11.0 | *React.js, Django, Fetch.ai Agents, LLMs, FastAPI, MongoDB*
- Built a centralized content management platform to enable creators to plan, schedule, and post content, achieving 60% improvement in workflow efficiency
- Integrated Fetch.ai agents with Gemini LLMs and ChatGPT for trend analysis, smart scheduling, and analytics, enhancing accuracy by 80% and reducing planning time by 50%

Study Buddy - Berkeley CalHacks | *React, Django, Hume AI, LangChain, Ollama, RAG, Microsoft's PHI-3 model, ChromaDB*
- Developed an AI-powered tutoring application with advanced voice interaction and study tools like mind maps, enhancing learner engagement and productivity
- Implemented Retrieval-Augmented Generation (RAG) with ChromaDB and fine-tuned Microsoft's PHI-3 model using LoRA and QLoRA techniques for resource-efficient adaptation, achieving 90% accuracy in personalized responses

Be Healthy | *React Native, Firebase, OAuth 2.0, NFC Technology*
- Developed an AI bot leveraging Llama3 and BERT-based top-k search to streamline insurance document interpretation, reducing response size by 50%
- Designed optimized AWS infrastructure with Glue, Redshift, S3, and Airflow, implementing parallel ETL jobs and query tuning to accelerate data processing by 30%