

Poorvith Gowda

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Summary

Accomplished Software Engineer with a Master of Software Engineering degree from the University of Melbourne, possessing 4+ years of experience designing, developing, testing, and maintaining enterprise web applications and software solutions for a globally recognised professional services firm serving diverse industries.

Education

Master of Software Engineering

University of Melbourne

Melbourne, VIC

Bachelor of Engineering in Computer Science

Malnad College of Engineering

India

Work Experience

Software Engineer

[Beyond EPiC](#)

2023 - Present

Melbourne, VIC

- Joined Beyond EPiC as the second engineer, leading the development of [Nested Phoenix](#) under [André Stephan](#). This computational tool models the materials and environmental impact of buildings and urban areas, from individual components like windows and walls to entire neighbourhoods. It uses detailed data and maps to support sustainable planning, retrofitting, and circular economy strategies.
- Developed the front-end using React, TypeScript, and Bootstrap to create a responsive and user-friendly interface, improving usability and navigation efficiency by 30%.
- Built and maintained a scalable backend with Python Django, implementing REST APIs for flexible and efficient data access. Containerised the application with Docker to streamline development and deployment, cutting deployment time by 40%. Managed and optimised the PostgreSQL database for faster queries and better data integrity across large datasets.
- Designed and implemented cloud-based architecture using AWS services, including EC2 for application hosting, S3 for static asset storage, and Lambda functions to automate data processing tasks. Integrated SNS and SQS for reliable communication between microservices, improving system scalability and resilience.
- Conducted A/B testing to evaluate the effectiveness of different growth strategies, features, and user experiences.
- Drove the development and design of [Rephrase](#) under [James Helal](#), a cutting-edge software tool for building designers to assess embodied carbon, energy, and water, leading to a 50% increase in assessment efficiency.
- Led front-end development initiatives utilising JavaScript and Tailwind CSS to craft an intuitive user interface.
- Engineered a robust back-end system using Python and Flask, optimising REST API performance, ensuring reliable data processing, and a secure authentication system using Firebase.
- Deployed the application on Heroku and established a CI/CD pipeline, reducing release times by 50%.

Application Developer Intern

InflaMed Pty Ltd

2023 – 2024

Melbourne, VIC

- Designed and developed a clinician-focused health-tech web application using Next.js, TypeScript, and Material UI, resulting in a 35% improvement in user task efficiency and faster onboarding for new clinical staff.
- Built a secure, scalable back-end using Python and Django, and implemented robust RESTful APIs to support seamless interaction between the front-end and the medical database.
- Deployed the full-stack solution on AWS, improving system uptime to 99.9% and reducing infrastructure-related downtime by over 40%.

Software Engineer

Accenture Solutions

2020 – 2022

Bangalore, India

- Led the Full-Stack development of a Customer Care Software System for an international client, resulting in a 40% reduction in customer response time and a 25% improvement in customer satisfaction scores.
- Engineered complex front-end features with Typescript, React, and Tailwind CSS, enhancing the application's user experience and achieving increased user retention.
- Designed and implemented a robust back-end system using Node.js, Express and MongoDB, optimising database schemas and RESTful APIs, which improved data retrieval speed.
- Enhanced application compatibility across diverse user environments by employing advanced techniques such as feature detection, vendor prefixes, and Polyfills, ensuring a 99% cross-browser compatibility rate.
- Deployed the application on AWS and set up a CI/CD pipeline, which streamlined the deployment process and reduced release times by 50%.

Projects

F1 Intelligence

Melbourne, VIC

Full-Stack Solo developer

- A solo-developed full-stack web application that delivers real-time Formula 1 telemetry data, race analytics, and interactive race replay visualisation.
- I used TypeScript, React and Redux to develop the Front-end, and FastAPI Python for the backend, integrating OpenF1 API with Redis caching for optimal performance.
- I developed and integrated a machine learning prediction system using scikit-learn's Random Forest algorithm, leveraging F1 telemetry data to predict lap times with 85% confidence, incorporating cross-validation and feature engineering techniques to prevent overfitting.
- I implemented advanced optimisation techniques, including request debouncing and parallel processing, achieving faster data loading speeds.
- In parallel, I also developed a robust CI/CD pipeline, utilising Docker for seamless production-level deployment
- Furthermore, I harnessed PostgreSQL for efficient data storage, ensuring the system's stability and reliability, aligning with the mission to deliver cutting-edge solutions to the users

Finsplore – Smart Financial Assistant (*Under Development*)

Melbourne, VIC

Lead Developer

- Leading the development of an innovative financial management application focused on automation and accessibility, designed to simplify complex financial decisions for users without financial expertise
- Engineered a cross-platform mobile application using Flutter and Dart, creating an engaging and intuitive user interface that makes financial management accessible to users of all experience levels
- Developing a robust backend system using Node.js, implementing complex financial algorithms and data processing capabilities that power accurate financial projections and recommendations
- Integrated AI-powered assistant functionality that provides personalised financial guidance, helping users understand their financial situation and make informed decisions without requiring extensive financial literacy
- Designed dynamic data visualisation features that transform complex financial data into easily understandable graphical representations, increasing user comprehension and engagement by an estimated 50%

KnowHub

Melbourne, VIC

Full-Stack Solo Developer

- Solo-developed an AI-powered knowledge management platform that automatically captures, transcribes, and organizes team meeting discussions into searchable, structured insights using OpenAI's Agent SDK and Faster-Whisper for speech-to-text processing.
- Built a sophisticated RAG (Retrieval-Augmented Generation) pipeline with a hybrid search architecture, combining semantic vector search (Pinecone) and PostgreSQL full-text search using the Reciprocal Rank Fusion algorithm, achieving sub-2-second query response times.
- Engineered a full-stack solution using TypeScript React with Redux for the frontend and FastAPI Python for the backend, implementing async task processing with Celery and Redis, multi-tenant data isolation with Row-Level Security, and vector embeddings using OpenAI's text-embedding-3-small model.
- Designed and implemented production-grade infrastructure with JWT-based authentication (Supabase Auth), automated CI/CD pipeline, comprehensive error handling and retry mechanisms, achieving 95%+ transcription accuracy and reducing team context search time from 10+ minutes to under 2 minutes.

Significant Highlights

- Involved in the complete Phase 1 development lifecycle of a customer care platform application named Speakeasy, created for the client Google
- Achieved the highest scores within the Computer Science Department, highlighting exceptional academic excellence throughout the final year of my Bachelor of Engineering studies
- The project titled 'Swarm Intelligence for Efficient Energy Management in MANET' was chosen from a pool of various proposals and received funding from the State Government through the 'Karnataka State Council for Science and Technology' initiative

Skills

- **Programming Languages:** Python | TypeScript | JavaScript | Java | C
- **Web Applications:** React | Node.js | Tailwind | Vue.js | Next.js | HTML | CSS | jQuery | Vuetify
- **Framework:** Flask | Django | Maven | Heroku | Plotly Dash
- **Tools:** Confluence/Jira | Git | Jenkins
- **Cloud Services:** AWS | Azure | GCP | Heroku