

David Ninan

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Software Engineer and Data Analytics professional specialized in **NLP** and **Event-Driven Structural Modeling**. Expert in integrating LLMs (OpenAI, Hugging Face) and Graph Databases (Neo4j) to map complex relationships between industrial clusters and external trade partners. Currently developing frameworks for **Trade Resilience** within the European Union, utilizing multi-task learning to identify lead-lag relationships between policy shifts and physical supply chain disruptions.

Areas of Expertise

- AI & Machine Learning Integration
- Data Collection & Analysis
- Agile Project Management
- Full-Stack Development (MERN, Java, Spring Boot)
- Data Engineering & ETL Pipelines
- Database Management (SQL, MongoDB, PostgreSQL)
- Project Planning & Delivery
- Cloud Deployment & Automation
- NLP & Sentiment Analysis
- REST API Development & Integration
- Cross-platform Application Development
- Search Engine Optimization

Professional Experience

Generative AI Developer

- Biyn Enterprises Pvt. Limited

Remote
April 2023 – present

Lead the end-to-end development of AI-integrated MVPs and scalable web applications—using React, Node.js, PostgreSQL, and cloud technologies—while integrating GPT and Hugging Face models to deliver intelligent automation, client solutions, and proprietary tools like VISION AI and Smart Grocery Assistant.

Key Achievements:

- Built and deployed multiple AI-integrated MVPs and custom web solutions for clients across domains, focusing on user-centric design and scalable backend architecture.
- Delivered full-stack web applications using React, Node.js, PostgreSQL, SQL, and RESTful APIs—integrating AI tooling, automation, and scalability.
- Established Biyn-Enterprises as a development studio delivering both client solutions and experimental product MVPs aimed at commercialization

Responsibilities:

- Lead end-to-end product development across idea validation, system design, backend APIs, and frontend interfaces using the MERN stack and cloud tools.
- Integrated custom AI workflows using OpenAI's, Gemini and Llama GPT API and Hugging Face models, enhancing business logic with intelligent automation.
- Consulted with clients to build tailored web apps and dashboards, while continuously experimenting with proprietary products under Biyn-Enterprises.

Robotics Mentor

- Steam Academy Pvt. Limited

Dublin, Ireland
Aug 2024 - April 2025

Promoted to Mentor Team Lead (Feb 2025)

As a Robotics Mentor, I empowered diverse student teams through hands-on programming, algorithm training, and personalized mentorship—guiding them in building innovative robots for competitions like RoboJam while fostering critical thinking, collaboration, and a passion for STEAM innovation.

Key Achievements:

- Mentored and guided a diverse group of students, "Next Gen Pros (NGPs)," fostering critical thinking and problem-solving skills in the fields of robotics and engineering.
- Actively contributed to the RoboJam competition by guiding students as they collaboratively built innovative robots to solve real-world challenges, enhancing their hands-on technical and problem-solving skills.

Responsibilities:

- Inspire curiosity and passion for innovation in STEAM by combining theoretical knowledge with hands-on robotics, teaching programming and algorithms, and preparing students for challenges like RoboJam.
- Provide personalized mentorship and foster a collaborative, inclusive environment to develop each learner's technical, analytical, and teamwork skills, empowering them as future tech leaders.

Teacher for Software Development

- Codekul Pvt. Limited

Pune, India
Aug 2022 - Jan 2023

As a Software Development Instructor, I trained and mentored students in technologies like React, Node.js, and SQL, leading to a 200% increase in hiring rates and successful delivery of custom apps for company partners. I also conducted workshops and certification-focused courses, equipping students with real-world, industry-ready skills.

Full Stack Developer

- AppyStack Pvt Limited

Pune, India
April 2022 - April 2023

As a Full-stack Developer and Team Lead at AppyStack, I developed reusable React libraries, a no-code dynamic reporting system, and client-focused applications cutting labor costs while leading a team to deliver scalable web solutions using React, Node.js, and PostgreSQL databases, and driving a reduction in testing and deployment time through effective client engagement and mentorship.

Key Achievements:

- Built custom libraries and React packages that were reused over multiple other projects, greatly reducing labor costs and development time for building these applications.
- Built a NO-CODE Dynamic Reporting System for hospitals' billing systems, which greatly reduced labor costs for our company by 300%. Built a scheduling and management app for our clients. These applications provided clients with profitability by increasing customer and data retention.
- As a team lead, I took the initiative to ensure customer satisfaction by understanding the needs of the client individually and translating them into actionable tasks for my team members. This led to a 70% reduction in the time taken for testing and deployment.

Responsibilities:

- Consult with the business to understand their infrastructure requirements for application UI/UX and database architecture.
- Build custom web applications for our clients using frontend and backend technologies like SQL databases, React, and Node.js.
- Lead and mentor team members by providing training and upskilling opportunities in emerging technologies and IT processes.

Thesis and Projects

Thesis: Comparative Analysis of Deep Learning vs. Traditional Models for Sentiment Analysis - Dublin Business School, Dublin, Ireland:

- Designed and implemented scalable NLP pipelines to analyze Twitter data, focusing on sentiment classification and emotion detection.
- Developed and tested NLP models using Python and R, Pytorch, TensorFlow, and Scikit-learn, comparing traditional ML algorithms with deep learning models like ANN, RNN, and LSTM. Applied BoW/TF-IDF, cross-validation, and SGD to extract features and optimize performance, delivering insights from real-time sentiment analysis.

Banking Data Warehouse - Dublin Business School, Dublin, Ireland:

- Designed a relational database and data warehouse for a simulated banking system, implementing ETL pipelines with SSIS and creating analytics-ready star schemas.
- Built dashboards using Tableau and SSRS to visualize financial KPIs, ensuring data quality, normalization, and audit-compliant practices aligned with industry standards.

Personal Investment Portfolio Management

- Automated data ingestion of 10-K filings and news using custom Python scripts to identify high-intrinsic-value opportunities.
- Achieved a 15% CAGR over 3 years by managing a long-term equity portfolio based on Value Investing principles.

Education

MSc Data Analytics | 2024

Dublin Business School, Dublin, Ireland

Bachelor in Computer Science | 2021

Vishwakarma University, Pune, India

Exchange Student for Bachelor in Computer Science | 2020

Hof University, Hof, Germany

Professional Certifications

- **Credential of Readiness (Business Analytics, Financial Accounting and Economics for Managers)** | Harvard Business School
- **Money Coach and Befriender** | Christian Against Poverty

Technical Proficiencies

- **Machine Learning & NLP:** R – program, Python, Pandas, NumPy, Keras, Tokenization, Fine-tuning, PyTorch, TensorFlow, Hugging Face.
- **Generative AI:** LLM Integration (OpenAI, Gemini, Llama), Text Summarization, Predictive Features.
- **Data Engineering:** ETL Pipelines, Star Schema, SQL (PostgreSQL, MySQL), NoSQL (MongoDB), Spark, SSIS.
- **Full-Stack & DevOps:** Node.js, Python (FastAPI), Java, JavaScript, TypeScript, React, Vue, AWS, Azure, CI/CD, Git.
- **Analytics & Reporting:** Tableau, Power BI, SSRS, Technical Documentation, Stakeholder Communication.
- **Others:** Figma, Data Analyst, Machine Learning, Deep Learning, No-Code development, API Integrations,

Interests and Other Activities

Volunteering:

- **Lab Lead, (FaithTech):** Building technology tools and securing partnerships for impactful nonprofit digital solutions.
- **Treasurer (Meri Asha):** Overseeing financial strategy and stewardship for community empowerment programs. .
- **Money Coach and Befriender (Christians against Poverty):** Providing financial education and money management coaching.

Hobbies: Playing Music (Guitar, Piano), Garden Landscaping, Travelling, and Camping.

Languages: English (Native/Professional); German (Goethe A1 Certified).

References

Available on Request