

# BIBIN PRATHAP

AI Tech Lead

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## Profiles

[bibinprathap](#)

## Summary

Seasoned AI and Analytics Leader with over 14 years of experience in AI strategy, business intelligence, and data science. Proven track record in leading AI-driven initiatives that optimize operations, enhance decision-making, and unlock new revenue streams. Adept at aligning AI strategies with business objectives and fostering cross-functional collaboration. Expertise includes Generative AI, LLMs, NLP, AI governance, and AI-driven business transformation.

## Core Competencies

- Team Leadership
- AI Agent Architectures (MCP Client, MCP Server, AI Agent, AgentFlow)
- Generative AI & Multi-Agent Systems
- NLP, LLMs, Transformers ( T5, GPT, ViT)
- Reinforcement Learning & Graph Neural Networks
- Vector Databases (Pinecone, Weaviate, FAISS)
- MLOps (ModelOps, Deployment, Monitoring)
- Cloud & Edge AI (AWS, Azure, On-Prem LLMs)
- Python, TensorFlow, PyTorch, scikit-learn
- AI System Design, Ethics & Governance
- Big Data (Kafka, Spark, Hadoop), Microservices
- RAG Pipelines, LangChain, DeepSeek, LLaMA
- Team Building, Agile Delivery, Stakeholder Management
- On-Premise LLMs & AI Infrastructure Optimization

## Experience

**Abu Dhabi Executive Office** **August 2021 -Present**  
AI Strategy Lead | Data Science & BI Analytics Abu Dhabi

## AI & Machine Learning Leadership

- Led and scaled enterprise-grade AI initiatives** across NLP, computer vision, and reinforcement learning domains; managed a cross-functional team of 10+ engineers and scientists.
- Architected and deployed **on-prem and cloud-based LLM systems** using LLaMA, DeepSeek, GPT, and ViT.
- Built **vectorized RAG pipelines** leveraging Weaviate and Pinecone for semantic search and document intelligence.
- Designed **multi-agent and autonomous systems** for smart inspections and operations automation.
- Developed **real-time AI-driven dashboards and knowledge systems**, embedding AI across multiple departments.
- Implemented **MLOps pipelines** for model training, evaluation, and CI/CD across multiple environments.
- Developed vectorized document processing and RAG architectures for knowledge-based AI applications.
- Managed and mentored AI engineers, data scientists, and BI analysts.
- Fine-tuned LLMs for domain-specific applications and automated ML workflows.

**Key Technologies:** Python, TensorFlow, PyTorch, Transformers, HuggingFace, Weaviate, LangChain, GPT APIs, ViT, Azure, AWS, Spark, Kafka

## Key AI Projects

### AI Agent - Space AI

- Designed AI-driven workflow automation and form builder integration.
- Developed real-time workflow modeling using BPMN API.
- Enabled AI-assisted decision-making through workflow data insights.

### Document Chat Project

- Enhanced AI capabilities with automation and reporting.
- Automated dashboards and scoring mechanisms for operational effectiveness.
- Integrated AI for global delegation visit tracking and country insights.

### GIS Self-Service

- Developed a GIS data platform with 200+ layers for data-driven decision-making.
- Enabled advanced spatial analytics and real-time monitoring.

### Landing Page & Data Platform

- Created a data insights hub showcasing AI and BI products.
- Developed a dataset search and request portal for streamlined data access.

### Complaints Search AI

- Built an AI-powered search system for complaint management.
- Implemented NLP-driven synonym matching for improved search accuracy.

### Inspection AI

- Developed an AI-powered inspection automation platform.
- Integrated task management, work order tracking, and scheduling.

### Geo Space AI

- Combined GIS and BIM for real-time construction progress tracking.
- Enhanced project monitoring with AI-powered insights.

## Technical Expertise

- Expertise in Generative AI, NLP, Langchain, Deep Learning, and MLOps.
- Skilled in Python, R, TensorFlow, PyTorch, SQL, MongoDB, PostgreSQL, AWS, and Azure.
- Developed dashboards with Power BI, ArcGIS, and Google Maps API.
- Built large-scale ML projects, including traffic analysis and livability dashboards.

## Full-Stack & Application Development

- Developed applications using React.js, React Native, Angular, Next.js, .NET, Node.js, Express.js, and GraphQL.
- Led mobile and web app development, including survey apps, government office optimization, and executive dashboards.
- Worked on backend systems using ASP.NET Core, PL/SQL, Redis, PostgreSQL, and Oracle 12g.

## Notable Projects

- Livability Dashboard:** ArcGIS-based 3D mapping for district-level analytics.
- Traffic Dashboard:** Real-time traffic monitoring using Google Maps API.
- Survey Mobile App:** Location-based data collection and scheduling using React Native.
- Aspiration Dashboard:** Strategy visualization for Abu Dhabi Executive Office.

**Tech Mahindra** **March 2019 – August 2021**  
Senior AI & Data Science Consultant Abu Dhabi

## AI & Digital Transformation Leadership

- Led AI adoption and digital transformation projects for government and enterprise clients.
- Developed AI-driven dashboards, real-time analytics, and decision support systems.
- Implemented NLP-based automation solutions, reducing manual workloads by 40%.
- Designed and fine-tuned LLMs for domain-specific applications.
- Built retrieval-augmented generation (RAG) architectures for AI-powered search and knowledge discovery.
- Led cross-functional teams integrating AI with business intelligence platforms.

## Mobile Inspection Management System (Abu Dhabi Municipality)

- Developed a mobile app for inspectors to conduct 15 types of inspections, including building/shop inspections, noise pollution, and abandoned vehicles.
- Integrated **geofencing, inspector location tracking, and file uploads**.
- Implemented **Emirates ID scanning (Google Vision API), camera object detection (OpenCV), and ArcGIS Esri maps**.
- Enabled **Bluetooth printer connectivity and real-time task notifications (Firebase)**.
- Built using **React Native, Redux, Java, Jest, Enzyme** for Android & iOS.
- Backend developed with **ASP.NET Web API, Entity Framework 6, Oracle 12g (PL/SQL)**.
- Followed Agile methodology and implemented process improvements and software testing.

## Technologies & Tools

- Frontend:** React Native, Redux, Java, Jest, Enzyme
- Backend:** ASP.NET Web API, Entity Framework 6, Node.js, C#, Oracle 12g (PL/SQL)
- DevOps & Testing:** Git, WebPack, Firebase, Jest, Azure
- IDEs:** Android Studio, Xcode, Visual Studio Code, Visual Studio 2017, Toad

**Stroika Computer Software** **March 2018 - March 2019**  
Senior Software Developer Abu Dhabi

- Worked on **My Ministry Project** as part of a **14-member team**, reporting to the Team Lead.
- Developed **Performance Dashboard Software** to measure department performance based on KPIs, featuring **graphical reports, tables, and evidence tracking**.
- Built **secure email communication software** for embassies and a **media reporting system** for global embassy submissions.
- Developed a **department performance monitoring application**, enabling KPI creation, monthly/quarterly scoring, and graphical performance visualization.
- Followed **Agile methodology**, implemented **process improvements**, and conducted **software testing**.

## Technical Expertise & Tools

- Frontend:** Angular 6, TypeScript, JavaScript, HTML5, CSS, Bootstrap
- Backend:** ASP.NET Core 2.2, Entity Framework 6, Node.js, Express.js, C#, Dapper ORM
- Databases:** PostgreSQL, SQL Server
- APIs & Services:** ASP.NET Web API, WCF Services
- DevOps & Testing:** VSTS, Azure, WebPack, Jasmine (Unit & Integration Testing)
- Mobile Development:** React Native

**State Corps** **Jan 2015**  
Lead Software Developer Mar 2018

- Reported to the **Manager** and **led a team of 5 developers**, overseeing **application development, support, and multiple project executions**.
- Provided **technical leadership** in **database architecture, software design, and development**, following **Agile-Scrum methodology**.
- Managed **application server, firewall supervision, front-end architecture (Angular6), and software testing**.
- Conducted **team administration**, including work allocation, performance monitoring, feedback, and technical interviews.

## Key Projects

### Manufacturing ERP Software

- Comprehensive **business management solution** with modules for **Finance, Sales, Inventory, Procurement, Fixed Assets, HR & Payroll**.
- ERP Demo:** Manufacturing ERP

### Cargo/Parcel Management Software

- End-to-end shipment management system** for parcel delivery, shipment tracking, and logistics.
- Developed **Android & iOS mobile apps** for shipment booking and parcel pickup.
- Website:** AeroParcel

### Forex Exchange Software

- Comprehensive platform** for **remittance and currency exchange** operations.

## Technical Expertise & Tools

- Frontend:** Angular6, Angular4, ES5, Bootstrap
- Backend:** .NET Core, ASP.NET Web API, Node.js, Express.js, C#, Dapper ORM
- Databases:** SQL Server
- DevOps & Testing:** Azure, VSTS, WebPack
- Mobile Development:** React Native

**ESAT** **Feb 2014 -July 2016**  
Software Developer | Web Application & ERP Development Abu Dhabi

- Led **ERP development** integrating Finance, Sales, Inventory, Procurement, and Asset Management.
- Supervised **web application development** for mission-critical enterprise environments.
- Implemented **banking software** for call centers and developed **WCF services** for enterprise utilities.
- Oversaw **database management, access control, and report development** (Crystal Reports).
- Developed an **Online CRM System** with modules for Lead Management, Quotation, and Sales Invoicing.

## Tech Stack:

ASP.NET, MVC5, C#, Node.js, Express.js, AngularJS, Oracle, Azure, Git, Web API, Dapper.

**Alwaffa Group** **March 2012 -March 2014**  
Senior .NET Developer | E-Commerce Development Dubai

- Developed **12 dynamic e-commerce websites** with **product, user, and order management**.
- Integrated **online payments** via **Mashreq Bank, PayPal, and Etisalat Comtrust**.
- Led **analysis, design, coding, review, and testing**, mentoring junior developers.

**Education**

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**BMC Of Engineering** **Apr 2007 - Apr 2011**  
Computer science Bachelor s Degree (A)  
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## Skills

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### Pytorch

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### Large Language Models (LLM)

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### Tensorflow

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### DeepSeek

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### Python

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### RAG

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### AI Agent

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### Langchain

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### NextJs

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### Node.js

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### React Native

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### ArcGIS

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### Power BI

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