

# Mukund Biradar

## Senior Python & AI Engineer | LLM & Cloud Solutions | Full stack Developer

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### Professional Summary

### Immediate Joiner& Ready to relocate

I am a Senior Python & AI Engineer with over 12 years of experience building scalable, reliable and user-friendly systems. I specialize in optimization, scheduling and algorithms, tackling complex NP-hard problems to deliver practical solutions. My work spans full-stack development, cloud environments (Azure, AWS, private) and AI/ML systems, including multi-agent AI workflows and LLMs. I thrive at the intersection of technology and business, translating complex requirements into solutions that are efficient, maintainable and impactful. I am passionate about driving innovation and creating systems that make a tangible difference.

### Skills and Technologies

- **Programming Languages:** Python, Java, TypeScript, JavaScript,
- **Frameworks & Libraries:** Django, Flask, React JS, FastAPI, Pandas, Spring Boot, logging, RESTful API design, asynchronous programming, scalability, performance optimization.
- **ORM & Databases:** CosmosDB, SQLAlchemy, SQLModel, MySQL, PostgreSQL, Oracle, MS SQL Server
- **Cloud & DevOps:** Azure AI Foundry,Azure DevOps), AWS, Docker, GitHub Actions, GitLab
- **AI/ML & LLMs:** LangChain, PDF-trained LLM, Agentic AI, Vector Databases, RAG
- **API Development & Security:** RESTful APIs, OAuth, JWT Authentication, JSON, API testing, pytest, unittest, code reviews
- **Scripting & Automation:** Python scripting,Ansible, Kubernetes, CI/CD pipelines unittest, pytest, Selenium, Postman
- **Data Engineering & BI:** PostgreSQL, MySQL, Oracle, Tableau, Power BI, DeepInsight, data visualization
- **Networking & Security:** Network Infrastructure & Servers, Security Protocols (SSL/TLS, OAuth 2.0)
- **Methodologies & Tools:** Agile, Scrum, Kanban, Jira, Azure dashboards
- **Language :** English (Fluent) , German (A2 – Actively persuing)

### Professional Experience

#### 1. AIKIT Digital (Deloitte – Short Term ) Senior Project Associate , Frankfurt , Germany. [Oct 2025 – Current]

- Designed, created and registered new AI agents within an existing Azure AI Foundry multi-agent system, improving system extensibility.
- Configured AI agents, planners and group chat manager in Azure Conversational AI Foundry for a customer.
- Integrated agents with Cosmos DB and vector databases to enable faster, more accurate document- and API-based retrieval.
- Designed Lang Chain workflows and executed end-to-end agent testing, validating plan execution, routing and data responses.
- Optimized agent performance and backend integration, reducing response latency and increasing retrieval accuracy.
- Designed and implemented optimization and scheduling solutions using Python to solve complex task (using planner) allocation and resource management problems.
- Exposed these algorithms via FastAPI endpoints, enabling scalable and real-time access to optimized schedules.
- Integrated modern frontend technologies (React/JS/PWA) with Python-based backends (FastAPI), enabling scalable full-stack solutions.

#### 2. Leibniz Rechenzentrum (LRZ) Senior Python Developer, München, Germany. [Apr 2023 - Jun 2024]

- Developed containerized Python microservices using FastAPI and asyncio, deployed via Docker for scalable and efficient backend systems.
- Built Flask-based models on PostgreSQL and leveraged Redis caching to reduce database load by 70%, improving application performance.
- Developed Python microservices to handle **complex optimization problems** efficiently.
- Developed custom browser extensions and sidebar components using JavaScript/TypeScript, enabling quick access to dashboards, AI insights and reporting tools.
- Streamlined server setup and optimized performance using Ansible, enhancing system reliability and maintainability.
- Connected applications securely to European Data Spaces via REST APIs, enabling compliant data exchange and interoperability.

#### 3. Abacus Staffing & services Pvt Ltd (IBM) Python Lead, Bangalore, India. [July 2022- Feb 2023]

- Led Python development teams and collaborated across projects to deliver high-quality backend solutions
- Automated workflows with Python scripts, saving 25+ hours per week.

- Set up CI/CD pipelines with Git, GitHub Actions, Azure DevOps and Kubernetes.
- Implemented OAuth2 and JWT authentication for secure API access.
- Managed project modules and Python packages in JFrog Artifactory and utilized them across projects to ensure consistent builds and deployments.
- Improved testing coverage with pytest and Selenium, reducing production bugs.

#### 4. **BR Raysoft Global Pvt Ltd (Intel, Infosys) Python Consultant (UI/UX), Bangalore, India [Sep 2021 - Jun 2022]**

- Improved and fixed responsive UI/UX issues on Intel.com by enhancing existing web components using JavaScript, HTML, CSS and Coveo, resulting in a more seamless and user-friendly experience across devices.
- Configured Coveo Search for indexing and metadata setup by integrating data XML files, databases, Salesforce and Amazon S3 to ensure seamless content display including processor, software, graphics information & complete product listings.
- Developed Python scripts to fetch and separate data based on metadata, optimizing content accessibility on intel.com.
- Collaborated with global Intel teams to configure XML tags, fix metadata and standardize data formats using URLs, improving search accuracy via Coveo Search.

#### 5. **Sinomonitor International Pvt Ltd Senior Software Engineer, Beijing China [May 2015 - Aug 2020]**

- Led full lifecycle development of software applications, from requirements analysis and object-oriented design to coding, testing and maintenance, ensuring standards compliance.
- Developed a teaching platform and an e-commerce website using Django and PostgreSQL, delivering secure, scalable and user-friendly web applications.
- Designed intuitive UI, optimized performance and integrated systems, software analysis, quality assurance and project management to deliver robust solutions.
- Built Power BI dashboards integrating semantic layer for automated insights, reporting and visualization.
- Built a Python-based data product that ingests, processes and visualizes production and operational data, providing real-time insights and recommendations for optimized decision-making.
- Built e-commerce portal and a teacher job search platform using Django, ensuring secure, scalable and user-friendly features.
- Created data visualization dashboards using DeepInsight, Tableau and Power BI and developed ML-based video analysis tools for enhanced analytics.

#### 6. **Develop Dreamz Industries Pvt Ltd Database Administrator (DBA),Pune ,India [Feb 2014 - Apr 2015]**

- Designed and optimized databases (MS SQL, PostgreSQL, MySQL, Oracle) for better performance and scalability.
- Implemented query optimization techniques and monitored system health using Azure Monitor and Log Analytics.
- Assisted in deploying .NET, Java and C++ applications, managing server configurations and project setups.

#### 7. **Psystems IT Services Pvt Ltd Database Engineer, Pune, India [May 2012 - Jan 2014]**

- Built secure, compliant database schemas for hospitality, healthcare and real estate systems.
- Managed Linux servers (Fedora, CentOS, RHEL), ensuring uptime and optimized performance.
- Provided technical support to developers, facilitating smooth application deployments and system integrations.

### **Education**

**Master of Computer Science - University of Pune, India - [May -2009 - May 2011]**

**Key Coursework:** Algorithms, Databases, Networking, Data Structures

### **Project**

**Highlighted Project: PDF-Trained LLM (Language Model on Custom PDFs) [Jan 2025 - May 2025]**

**Description:** url: <https://github.com/mukund7296/pdf-trained-LLM>

Developed a Python-based system to train a lightweight LLM on custom PDF documents. The system processes, embeds and enables querying of All PDF content using document embeddings and interactive chat.

#### **Key Features:**

- Converts PDFs to text and splits into chunks
- Trains LLM on PDF content (--train)
- Generates embeddings (--create-embeddings)
- Enables chat and Q &A on PDF data (--chat, --query)
- Fully configurable (model, chunk size, training params)
- Modular CLI-based workflow

**Example : Text → Tokenizer [IDs, IDs] → Neural Network [Content IDs] → Output [Prediction / Embedding / Response]**

### **Certifications / LinkedIn Learning / Courses**

- **ChatGPT Masters:** AI Prompt Engineering – 16 Hours course (2023)
  - **Machine Learning:** Generative AI, Data Analysis with Pandas
- Achievements & Posts :** <https://www.linkedin.com/in/mukund-techlead/>