ABHISHEK SINGH

Software Developer | Django • RestAPI • MongoDB• AWS
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ABOUT ME

Python Engineer with 2 years of experience in backend development and automation. Proven ability to build and deploy scalable, production-grade APIs and AI solutions using Python (Django, FastAPI), AWS, and Docker. Passionate about creating efficient, high-performance systems.

PROJECT HIGHLIGHTS

- **ML-Based Document Classification and Automated Uploading** | Python, FastAPI, TensorFlow, Pandas, NumPy, MongoDB, AWS S3, Lambda, API Gateway, Docker, RAG, Vector Database (Pinecone/FAISS)
- Built an end-to-end ML + RAG pipeline to classify and retrieve unlabeled multi-format documents (PDF, DOCX, JSON, Excel, Images) and route them to AWS S3 with structured storage.
- Achieved 93% F1-score using a hybrid TF-IDF + deep learning embeddings model with vector search, enabling semantic retrieval from a vector database for advanced query use cases.
- Processed 100k+ documents/day with <3s response time, deployed via FastAPI, AWS Lambda, with RBAC and JWT for secure enterprise-grade access.
- **AWS Automation for Zoho Creator | Python, AWS Lambda, S3, SES, PostgreSQL:** Automated verification workflow with instant cloud uploads and email notifications, reducing processing time by 50%.
- Implemented secure file storage and retrieval with AWS IAM roles, ensuring compliance with data privacy policies.
- **Headless Web Automation & Scraping | Selenium, Playwright, PyTesseract, AWS EC2, REST API**
- Built headless automation for data scraping and client portal updates with 98% accuracy and 99% uptime.
- Automated OTP/CAPTCHA handling, deployed on EC2 with scheduled triggers, and integrated REST APIs for instant report delivery.

EXPERIENCE

1. **Deloitte India | Feb 2024 – Present**
- Designed and deployed REST APIs with Flask and AWS Lambda, improving data retrieval performance by 40% and reducing latency to sub-200ms for high-traffic endpoints.
- Automated AWS S3 and SES workflows for verification reports, cutting turnaround time by 50%.
- Integrated backend APIs with React-based dashboards, enhancing reporting speed and accuracy for 500+ daily users.
- Containerized services using Docker and deployed on Kubernetes, achieving 99.9% uptime.
2. **Deloitte India | Intern | 6 Months**
- Developed Python scripts to automate AWS Athena queries and Glue ETL jobs, saving 15+ hours/week in manual data processing.
- Improved backend API query execution by 30% through indexing and caching strategies..
3. **Nibodh Solution Pvt Ltd | Intern | 3 Month**
- Built custom UI components with HTML, CSS, and JavaScript for SEO-optimized WordPress websites.
- Integrated REST APIs for analytics and tracking, reducing manual data entry errors by 20%.

EDUCATION

- B.Tech. in Computer Science & Engineering – Galgotias College, UP – 2023 | 75%
- Diploma in Electrical Engineering – RBS Engineering College, UP – 2020 | 70%

SKILLS SECTION

- **Backend & Architecture:** Python (Django, FastAPI, Flask), REST API Design, OOP, Microservices, Asynchronous Processing, Web Scraping (Selenium, Playwright), Query Optimization, Caching Strategies, RBAC, JWT Authentication
- **Databases:** MySQL, MongoDB, Vector Databases (Pinecone, FAISS)
- **Cloud & DevOps:** AWS (EC2, S3, Lambda, VPC, EKS, SES, API Gateway), Docker, GitHub Actions, Linux
- **AI/ML:** Scikit-learn, TensorFlow, Hugging Face Transformers, RAG (Retrieval-Augmented Generation), NLP, Pandas, NumPy, PyTesseract OCR
- **Frontend (Support):** React.js, Javascript, Material UI
- **Tools:** Git, Postman, VS Code, Jira

CERTIFICATIONS

- AWS Certified Cloud Practitioner
- GCP Associate Cloud Engineer
- (In Progress) AWS Solutions Architect Associate

ACHIEVEMENTS

- Delivered three automation solutions in Deloitte within first year, adopted by multiple project teams.
- Tech innovator award for process optimization.