

Abemelek Berhanu

Python | Django | SQL | Machine Learning Engineer

Addis Ababa, Ethiopia

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Professional Summary

Detail-oriented and project-driven Software & Machine Learning Engineer with strong hands-on experience in **Python**, **Django**, **SQL**, and **Machine Learning**. Proven ability to design, build, and test end-to-end web applications and ML-powered systems, including an **AI Job Recommendation System**. Strong foundation in data processing, backend development, and model evaluation, with a focus on clean architecture, scalability, and real-world problem solving.

Core Skills

Programming & Backend Development

- **Python** (advanced): OOP, data structures, scripting, API development
- **Django**: MVC/MVT architecture, authentication, ORM, REST APIs, admin customization
- **Django REST Framework (DRF)**: serializers, views, permissions, JWT authentication
- **SQL**: PostgreSQL, MySQL, SQLite; complex queries, joins, indexing

Machine Learning & Data

- **Machine Learning**: supervised & unsupervised learning, feature engineering, model evaluation
- **Libraries**: NumPy, Pandas, Scikit-learn
- **NLP (basic-intermediate)**: text preprocessing, embeddings, similarity search
- **Model Evaluation**: accuracy, precision, recall, F1-score

Tools & Technologies

- Git & GitHub (version control, collaboration)
 - Docker (basic containerization)
 - Render / Railway / Heroku (deployment)
 - Linux & Bash (basic)
 - VS Code
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Projects

AI Job Recommendation System (Capstone / Personal Project)

Technologies: Python, Django, PostgreSQL, Scikit-learn, Sentence Transformers

- Designed and implemented a full-stack AI-powered job recommendation platform.
- Built secure user authentication and profile management using Django.
- Implemented **resume parsing** to extract skills, experience, and education.
- Developed a **vector-based job matching system** using embeddings and cosine similarity.
- Performed **skill-gap analysis** by comparing candidate skills with job requirements.
- Integrated external job APIs and structured job data in PostgreSQL.
- Deployed and tested the application with real datasets to validate recommendation accuracy.

Key Outcomes: - Improved job-candidate relevance through semantic similarity matching. - Achieved clear, testable KPIs for resume parsing accuracy and recommendation relevance.

Resume Parsing & Skill Extraction Tool

Technologies: Python, NLP, Pandas

- Built a rule-based and ML-assisted resume parser.
 - Extracted structured data (skills, education, experience) from unstructured text.
 - Cleaned and normalized skill keywords for downstream ML tasks.
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Education

Bachelor's Degree in Computer Science / Software Engineering *(or related field)*

University Name, Ethiopia

Year: XXXX – XXXX

Practical Experience & Strengths

- Strong understanding of **end-to-end project development**, from requirements to testing.
 - Ability to translate real-world problems into **ML and software solutions**.
 - Comfortable working with databases, APIs, and data pipelines.
 - Quick learner with a research-oriented mindset in AI and Machine Learning.
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Certifications & Learning (Optional)

- Machine Learning with Python (Coursera / Udemy / Online Platform)

- Django Web Development (Online)
 - SQL for Data Analysis
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Availability

Open to **internships, junior roles**, and **project-based testing opportunities** in: - Machine Learning - Backend / Django Development - AI-powered Web Applications

References available upon request.