Edson Copque

Software Developer | Java | Python | SQL | AI

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Starstruck Achievement

This badge recognizes that @ecopque created a repository that has many stars, demonstrating the community's appreciation for your valuable contributions.

Introduction

Take a seat, grab a coffee, and let's embark on a coding journey together while exchanging ideas. In this space, we'll explore a variety of projects, always with a focus on creativity and problem-solving. Regardless of the challenges that come our way, we'll tackle them together and find a solution. Ready? Let's dive in!

Technical Skills

With knowledge in Java and Python, along with various complementary technologies, I have explored different areas of development, always striving to improve and learn new approaches. Here are the tools and technologies I am currently working with:

Category	Technologies	Description
🧠 **Programming Logic**	Java, Python, HTML, CSS, SQL, Shell	Core programming and markup languages for web development and scripting.

Category	Technologies	Description
⚙️ **Frameworks and Libraries**	Django, FastAPI, Ajax*, MVC, ORM	Frameworks and patterns for web development and data manipulation.
🗃️ **Databases**	PostgreSQL, MySQL, MariaDB, SQLite	Database management systems for structured data storage and retrieval.
🌐 **Communication Protocols & Sockets**	TCP/IP, Client/Server	Protocols and architecture for network communication and server interaction.
📂 **File Handling with Python**	Binary, Reading, Writing, Sending, Receiving	Handling files with Python, including reading, writing, and network transfer.
🛠️ **Development Tools**	Docker, Compose, Nginx, Gunicorn, GIT, GitHub	Tools for containerization, version control, and deployment.
🌍 **Infrastructure**	GNU/Linux, Debian, GCP	Operating systems and cloud platforms for deploying and managing applications.
📋 **Methodologies**	TDD, Scrum*, Kanban*	Development methodologies for agile and test-driven development.
🌐 **APIs and AI**	Rest API*, Google API, OpenAI API, DeepSeek API	APIs for web services and artificial intelligence integration.
🧪 **Testing and Debugging**	Unit Testing, Debugging	Tools and techniques for testing and debugging code.

Studying these technologies.

The Map of My Tools
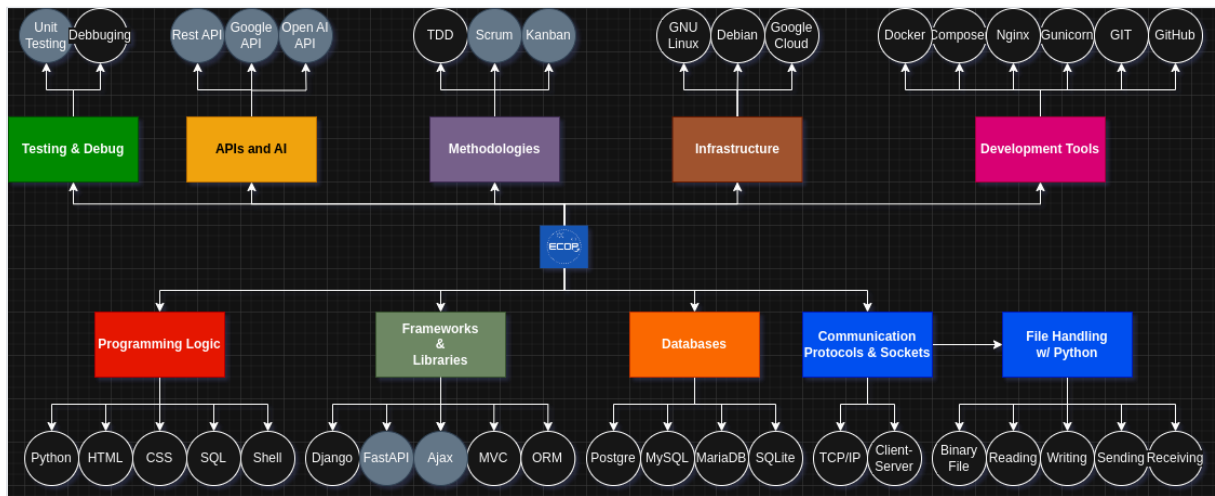
Code-First Philosophy, Library-Ready When Needed

Although I prefer writing clean, native code with minimal dependencies, I also have hands-on experience with a wide range of powerful libraries when the project demands it.

Category	Language	Packages	Description
🧮 **Scientific and Numerical Computing**	Python	numpy, math, decimal	Libraries for numerical operations, scientific computing, and precise math.
📊 **Data Analysis and Manipulation**	Python	pandas	Tools for data manipulation, cleaning, and analysis.
🗃️ **Database and ORM**	Python	pymysql, sqlite3, sqlalchemy, django, cursors	Database connectors and ORMs for relational database interaction.
🌐 **Web Scraping and HTTP Requests**	Python	requests, bs4, BeautifulSoup	Handling HTTP requests and extracting content from web pages.
🌐 **Web Scraping and HTTP Requests**	Java	Jsoup, Apache HttpClient, OkHttp	HTTP clients and HTML parsers for web data extraction and

Category	Language	Packages	Description
			API consumption.
📧 Email Handling	Python	email.mime.multipart, email.mime.text, smtplib	Modules for creating and sending emails via SMTP.
📂 File and Directory Management	Python	os, pathlib, shutil, zipfile	Manage files, directories, and compression.
🧪 Parsing and Text Processing	Python	re, json, csv, string, locale	Parsing strings, working with structured data and localization.
🧪 Parsing and Text Processing	Java	Jackson, Gson, Fastjson, Jsoup	JSON serialization, HTML parsing, and structured data processing.
🕐 Date and Time	Python	datetime, calendar, pytz, dateutil	Manipulating dates, times, and time zones.
🕐 Date and Time	Java	java.time, Joda-Time	Java's modern and legacy date/time APIs.
🔐 Security and Hashing	Python	secrets, hashlib	Secure random generation and hashing algorithms.
	Java	Jasypt	

Category	Language	Packages	Description
🔐 **Security and Hashing**			Simple encryption/ decryption of sensitive data in Java.
🧠 **Standard Library Utilities**	Python	sys, importlib, copy, itertools, functools, types, pprint, abc, contextlib, enum, dataclasses, collections, typing, argparse, subprocess, time, sleep, threading	Utility modules for functional programming, type hints, processes, and threads.
🧠 **Standard Library Utilities**	Java	Apache Commons Lang, Apache Commons IO, Apache Commons Collections, Guava, Trove, Reflections	Utilities for collections, strings, file I/O, and runtime inspection.
🧪 **Environment and Configuration**	Python	dotenv	Load environment variables from a .env file.
📊 **PDF and Excel Processing**	Python	pypdf2, openpyxl	Read and write PDF or Excel files.
📊 **PDF and Excel Processing**	Java	Apache POI	Read and write Microsoft Office (Excel/Word) documents.
	Python	pil, pyside6, qdarktheme	Create graphical interfaces and

Category	Language	Packages	Description
🎨 GUI and Visual Components			manage image/visual themes.
📥 CSV and Flat File Processing	Java	OpenCSV	Read and write CSV files efficiently.
📦 Custom or Project-Specific Modules	Python	utils, log, adtv2, Q	Project-specific logic or internal helper modules.
🔍 Miscellaneous	Java	ZXing	Barcode and QR code generation and reading.

Project Architecture

A high-level overview of the system's structure, illustrating how components are organized and how they interact to ensure scalability, maintainability, and clarity in development.

Current Environment

Technology	Version
Python	3.11.2
Java	21.0.7 (LTS)

Professional Certifications & Courses

Continuous learning is a core part of my professional development. Below are the courses and certifications I've completed to enhance my skills and knowledge in software development.

Foundations: Data, Data, Everywhere

Google-Coursera

November 18, 2024

Data Science

Python: Basic to Advanced

Udemy

November 19, 2024

Python Programming

Ask Questions to Make Data-Driven Decisions

Google-Coursera

December 3, 2024

Data Analysis

Bootcamps, Free Education and Employability

DIO

February 24, 2025

Career Development

Development Environment and First Steps with Python

DIO

February 25, 2025

Python Programming

Understanding Python Programming Language

DIO

February 26, 2025

Python Programming

Project Challenges: Create a Banking System

DIO

February 28, 2025

Python Project Development

Code Versioning with Git and GitHub

DIO

February 28, 2025

Version Control

Contributing to an Open Source Project

DIO

March 1, 2025

Open Source Development

Inaugural Python AI Backend Class

DIO

March 2, 2025

AI and Backend Development

Conditional Structures and Repetition in Python

DIO

March 2, 2025

Python Programming

Types of Operators with Python

DIO

March 2, 2025

Python Programming

Manipulating Strings with Python

DIO

March 3, 2025

Python Programming

Creating a Banking System with Python

DIO

March 4, 2025

Python Project Development

Working with Lists in Python

DIO

March 4, 2025

Python Programming

Learning to Use Dictionaries in Python

DIO

March 5, 2025

Python Programming

Notable Projects

News Analysis System with AI

Extracts and analyzes news headlines using AI.

AI Credit Risk Prediction

Predicts credit risk using machine learning models.

Group Chat

Real-time chat application using sockets.

Socket Transfer

File transfer system via socket communication.

Registration and Login Project

Django project with user authentication system.

Ecommerce Project

Full-stack e-commerce web application.

Blog Project

Django-based blog platform with user features.

VisualCalc Calculator

Visual calculator with Python logic.