Efekan Salman

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About Me

I am a software developer and aspiring researcher working at the intersection of artificial intelligence, computational neuroscience, and consciousness simulation. I enjoy designing modular, sustainable systems and bringing theoretical models to life through simulations. My goal is to develop tools that advance human-machine interaction and make meaningful contributions to the field of neurotechnology.

Career Objective

To become a software engineer and researcher contributing to artificial consciousness and neurotechnology on an international scale by developing projects at the intersection of AI, computational neuroscience, and cognitive systems.

Highlighted Projects

Artificial Consciousness Engine – NeuroConscious (5 stars on GitHub)

Python (Object-Oriented and Modular Design)

- Simulates agents' internal states, motivations, and decision-making processes
- Modular architecture: integrates emotion, curiosity, goals, and personality components
- Includes real-time visualization of Q-learning and agent states
- Open-source: GitHub Repository

Drug Consumption Prediction

Python (Machine Learning, Data Science)

- Developed a predictive ML model for drug consumption habits based on demographic and behavioral features
- Compared multiple algorithms with flexible training parameters
- End-to-end data preprocessing, feature engineering, model evaluation
- Open-source: GitHub Repository

Crocodile Weight Prediction Pipeline – Crocodylus-Gauge

Python (MLOps, Scikit-learn, Docker, Unit Testing)

- Developed a production-ready ML pipeline to predict crocodile weight from length measurements using a biologically-inspired Length³ feature
- Built modular Scikit-learn Pipelines with custom Transformers, validated via Unit Testing
- Packaged as a Python module and containerized with Docker for deployment
- Achieved **$R^2 \approx 0.98$** and low **RMSE (24.53 kg)** on test data
- Open-source: GitHub Repository

Work Experience

Software Intern – A&T Bank *Istanbul, Turkey • 2024*

- Contributed to internal projects using Object-Oriented Programming (OOP) and Clean Code principles
- Developed reusable components with design patterns (Factory, Singleton, etc.)
- Participated in database design and SQL optimization tasks

Education

Computer Programming (Associate Degree) *Gelişim University, Turkey • 2023 – 2025*

- Courses: C, C#, Java, Python, SQL, HTML/CSS, PHP

Conferences & Events

- **CCN 2025 – Conference on Cognitive and Computational Neuroscience** (Attendee) Gained insights into current research trends in computational neuroscience, cognitive modeling, and AI applications.

Certifications

- *Computational Neuroscience* – University of Washington (Coursera)
- *Data Science and Machine Learning with Python* – Udemy
- *Software Design Patterns* – Udemy
- *Clean Code* – Udemy
- *Object-Oriented and Functional Programming with Java* – Udemy

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Awards

- **The Duke of Edinburgh's International Award – Bronze Level** An internationally recognized development award granted for demonstrated discipline, leadership, and initiative in personal development, community service, and outdoor activities.

Technical Skills

- **Programming Languages:** Java, Python, C, C#, SQL, HTML/CSS, MATLAB
- **Data Science & ML Tools:** Scikit-learn, Pandas, NumPy, Matplotlib, Joblib
- **MLOps & Deployment:** Docker, Python Packaging (src), Unit Testing (unittest), Git
- **Core Topics:** OOP, SOLID, Clean Code, Multithreading, Asynchronous Programming, Design Patterns, Simulation Systems
- **Tools & OS:** Git, Linux Mint, PyCharm, VS Code
- **Interests:** Artificial Intelligence, Computational Neuroscience, Artificial Consciousness, Neurotechnology

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Languages

- **Turkish:** Native
- **English:** B2
- **French:** A2
- **Dutch:** A1

Links

- **Portfolio:** efekansalman.github.io
- **GitHub:** github.com/EfekanSalman
- **LinkedIn:** linkedin.com/in/efekan-salman