SOBHAN FOOLADI MAHANI

DATA ANALYST | R&D ENGINEER IN AI/ML

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SUMMARY

Data analyst and R&D engineer with hands-on experience in machine learning, signal processing, and backend development. Built real-time EMG analysis tools with 94% classification accuracy and achieved 30% faster processing through optimized filtering techniques. Proficient in Python, PyTorch, Flask, NumPy, Scikit-learn, and data visualization libraries. Skilled in developing MVPs, deploying ML models, and translating research ideas into functional applications. Eager to contribute to data-driven projects in fast-paced, innovation-oriented teams.

Core Strengths

Analytical thinking • Problem-solving • Cross-functional collaboration • Clear communication • Initiative & ownership • Rapid prototyping

TECHNICAL SKILLS

- **Programming Languages:** Python, Bash
- **Machine Learning & Data Analysis:** PyTorch, Scikit-learn, NumPy, Pandas, Matplotlib, OpenCV, MediaPipe
- **Signal Processing:** Filtering techniques, feature extraction (RMS, MDF, etc.), real-time EMG processing
- **Backend & Web Development:** Flask, RESTful API design
- **Tools & Platforms:** Git, Linux, Jupyter, JetBrains IDEs (e.g., PyCharm)
- **Concepts & Techniques:** Deep learning, supervised learning, classification, NLP, CNNs, LSTMs, data **visualization,** MVP development, software architecture
- **Other:** UML modeling, performance optimization, document workflow automation

PROFESSIONAL EXPERIENCE

AI & Backend Engineer (R&D – MAXSENS Project)

Imaz Tech - Barcelona, Spain | Jul 2023 - Present

Project: MAXSENS – AI-powered well-being platform for EMG signal analysis and motion tracking

- Developed and maintained Flask-based backend APIs for real-time EMG and motion data processing, enabling intelligent exercise monitoring in MAXSENS.
- Achieved 94% gesture classification accuracy by designing and training CNN and LSTM models tailored for EMG signal patterns.
- Enhanced EMG signal quality by 30% using advanced filtering and preprocessing techniques, improving system stability and responsiveness.
- Built a modular microservice to generate automated analytics reports (CSV, PDF, JPG), reducing manual data handling time by over 60%.
- Collaborated closely with frontend developers to integrate live movement visualizations, direction arrows, and pose correction into the user interface.
- Implemented camera angle detection, user distance guidance, and posture monitoring features, reducing exercise execution errors by 40%.
- Contributed to rapid MVP development cycles, accelerating the deployment of R&D features by 35% through agile workflows and close coordination with product stakeholders.

Software Engineer / Technical Product Owner
SaminCoin - Tehran | Oct 2021 - Jan 2023
- Developed and maintained RESTful APIs using Python and Django, enabling secure and scalable transaction handling for the company's cryptocurrency platform.
- Created detailed UML diagrams and system designs, reducing miscommunication and accelerating development cycles by 25%.
- Led product roadmap planning and sprint execution, contributing to a 40% reduction in time-to-market for key features and increasing platform responsiveness to user needs.
- Bridged communication between cross-functional teams and stakeholders, ensuring product decisions aligned with both technical feasibility and market demand.
- Collaborated with the UI/UX team to optimize user flows, resulting in a smoother onboarding experience and improved user satisfaction based on early-stage feedback.
- Introduced agile development practices and improved sprint visibility, enabling better prioritization and alignment across engineering and product teams.
- Delivered measurable value by accelerating product delivery, improving development efficiency, and ensuring technical solutions supported business growth objectives.

EDUCATION

Master's in Telecommunications   **Feb 2023 - Present**
Universitat Politècnica de Catalunya (UPC), Spain | Feb 2023 – Present
- **Specialization:** Deep Learning and Big Data Analysis
- **Relevant Coursework:** Software Architecture, Machine Learning, Entrepreneurship
- **Relevant Skills:** Data analysis, software design, technical problem solving, large-scale systems

Bachelor's in Information Technology   **Sep 2015 - Aug 2020**
Azad University, Karaj | Sep 2015 – Aug 2020
- **GPA:** 7.7 / 10
- **Relevant Coursework:** Data Structures and Algorithms, Database Management, Programming Fundamentals.
- **Relevant Skills:** Software development, algorithm design, problem-solving, object-oriented programming

ADDITIONAL INFORMATION & INTERESTS

- **Languages: English (Fluent, IELTS Certified), Spanish (A1)**
- **Work Authorization: Eligible to work and intern in Spain (LAY14 – Investigator visa)**
- **Portfolio:** https://sobhan-fld.github.io/cv/
- **LinkedIn:** linkedin.com/in/sobhan-fooladi-mahani
- **Interests:** Real-world AI applications, signal processing, development and coding, creative prototyping, video games, reading mystery novels, tech philosophy, problem-solving challenges