Saly Masri

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 GitHub • in Saly Masri • ⊕ Portfolio • KTH

PROFILE SUMMARY

Master's student in Computer Science Engineering at KTH with a strong background in **programming, analytical thinking, and problem-solving**. Proficient in **Python, software development, and technical communication**, with experience in **collaborative environments, adapting to evolving technologies, and strategic project execution**. Skilled in **critical reasoning, technical mentorship, and delivering high-quality solutions**. Passionate about **leveraging technology with creativity, ethical awareness, and innovation to drive impactful results**.

EDUCATION

•**Master of Science in Engineering, Computer Science** — *Stockholm, Sweden*

KTH Royal Institute of Technology — Expected: 2026

•**Bachelor of Science, Analytical Finance** — *Västerås, Sweden*

Mälardalens University — June 2021

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Python, Java, C++, C#, SQL, HTML, CSS, JavaScript, React
Databases: MySQL, MongoDB, PostgreSQL
AI & Machine Learning: Generative AI, TensorFlow, PyTorch, Scikit-learn, AI-Powered Automation
Embedded Systems & IoT, Networking & Protocols: Arduino, VHDL, Wireshark, BIND
Version Control: Git, GitHub
Digital Transformation: Process Automation, System Development, AI Workflow Optimization

SOME OF MY PROJECTS

For a full list of my projects, please visit my portfolio: SalyMasri.github.io

•**Hidden Markov Models: Forward & Viterbi**

Implemented probabilistic sequence analysis using Forward and Viterbi algorithms to model hidden states.
  − Developed a probabilistic sequence analysis model using **Forward** and **Viterbi algorithms**.
  − Applied **Hidden Markov Models (HMMs)** for sequence prediction and hidden state estimation.
  − Technology Used: Python, NumPy.

•**Restaurant Management System**

Built a digital system to streamline restaurant order handling and staff coordination.
  − Developed a **web platform** with an admin dashboard, customer interface, and **Android apps** for order processing.
  − Implemented a **REST API** using Jakarta EE with **MariaDB** for backend data management.
  − Technology Used: **Java**, **Jakarta EE**, JSF, **Retrofit**, MariaDB, Android Studio.

•**Security Vulnerability Analysis**

Identified and mitigated security vulnerabilities in web applications.
  − Exploited **XSS, SQL Injection, buffer overflows**, and **side-channel attacks**.
  − Developed defenses against **DoS attacks** and implemented **GPG encryption**.
  − Technology Used: Burp Suite, GPG, GDB, PyCryptodome, Docker, Python.

EXPERIENCE

• **Software Developer** — *2023 - 2024*

Freelance — Saudi Arabia
  − Developed a financial software, reducing project evaluation time from **2-3 months to 1-2 weeks**.
  − Built an interactive UI and backend using **Python, SQLite, PostgreSQL** for efficient data management.
  − Implemented fast search and sorting algorithms (Hash Map, B+ Tree, Trie) for rapid data retrieval.
  − Optimized performance with **Redis Cache, indexing, and parallel processing**.

•**Tutor / Teacher** — *2022 – Present*

Stiftelsen Läxhjälpen — Sweden
  − Provided personalized tutoring to help students overcome academic challenges.
  − Developed adaptive study plans tailored to individual learning styles.
  − Strengthened communication skills by simplifying complex concepts effectively.
  − Built students' confidence through structured learning support and encouragement.

•**Interviewer** — *2023 – 2024*

Gullers Grupp AB — Sweden
  − Conducted interviews to gather precise data for a social science research study.
  − Refined interpersonal skills by engaging with diverse individuals.
  − Practiced adaptability when handling unexpected interview interactions.
  − Enhanced active listening to ensure accurate data collection and meaningful conversations.

LANGUAGES

Arabic (Native) • English (Full Professional) • Swedish (Full Professional)