

# THAMER MASEER ALHARBI

## Software Engineer

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### 🔗 Activities

**LeetCode:** Solved 467 Problems (179 Easy, 242 Medium, 46 Hard)

LeetCode [↗](#)

**Codeforces:** Solved 134 Problems

Codeforces [↗](#)

**Vjudge:** Solved 211 Problems

Vjudge [↗](#)

- 45th Place in the worldwide Capture The Flag (CTF) challenge at Black Hat MEA. Nov 2024
- 3rd place in the KSAA-CAD Shared Task 2024 - Reverse Dictionary (RD) competition, organized by ArabicNLP in association with ACL 2024, Bangkok. Aug 2024
- Participated in the Alibaba Cloud Saudi Hackathon. Jan 2023
- Competed in the Arab Collegiate Programming Contest (ACPC). Dec 2022
- 3rd place in the Cyberhub Technical Content Creation Competition (Analysis Category). Nov 2022
- 3rd place (Bronze) in the Saudi Collegiate Programming Contest (Saudi CPC). Nov 2022
- Reached the Final Phase of the Saudi Collegiate Programming Contest (Saudi CPC). Sep 2022
- 4th Place in the Python for Data Analysis Competition 2. Mar 2022
- Participated in the Cyberhub CTF. Feb 2022

### 🔗 Experience

**University of Hafr AlBatin**, Software Programmer (Part-time) [↗](#)

Dec 2022 - Sep 2023

- Contributed to key projects, including:
  - **Faculty Management Specialization (FMS):** Focused on system design, including **UML** diagrams, database diagram design, and activity diagrams for managing faculty-related processes.
  - **Faculty Scholarship Flow:** Worked on system design, including **UML** diagrams, and activity diagrams design for tracking student scholarship progress. The system included automated alerts for students and their responsible faculty members regarding their scholarship status.
  - **University Hierarchy:** Designed a **tree-based hierarchical structure** for university data management, including faculty hierarchy and management using **Python**, **Pandas**, **Plotly**, **MS Excel**, and **PowerBI** for data analysis and visualization.
- Involved in the full software development lifecycle: planning, design, development, and testing.

### 🎓 Education

**University of Hafr AlBatin**, Bachelor's Degree Software Engineering

Aug 2018 – Aug 2023

- **Graduated Project:** Faculty Management Specialization (FMS).

## 🌟 Licenses & Certifications

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<b>Amazon Web Services (AWS)</b> , AWS Certified Machine Learning - Specialty <a href="#">🔗</a>	Oct 2024 - Oct 2027
<b>Amazon Web Services (AWS)</b> , AWS Certified Solutions Architect – Associate <a href="#">🔗</a>	Oct 2024 - Oct 2027
<b>HackerRank</b> , Software Engineer <a href="#">🔗</a>	Sep 2024
<b>Amazon Web Services (AWS)</b> , AWS Certified Cloud Practitioner <a href="#">🔗</a>	Feb 2024 - Oct 2027
<b>SDAIA</b> , Math for AI <a href="#">🔗</a>	Jan 2024
<b>SDAIA</b> , LLMs Practitioner <a href="#">🔗</a>	Dec 2023
<b>SDAIA</b> , ML Practitioner <a href="#">🔗</a>	Nov 2023
<b>SDAIA</b> , SDAIA ML Bootcamp <a href="#">🔗</a>	Oct 2023
<b>Alibaba Cloud SCCC</b> , Alibaba Cloud Saudi Hackathon <a href="#">🔗</a>	Feb 2023
<b>International Collegiate Programming Contest (ICPC)</b> , The 2022 ICPC ACPC <a href="#">🔗</a>	Dec 2022
<b>International Collegiate Programming Contest (ICPC)</b> , The 2022 ICPC SaudiCPC <a href="#">🔗</a>	Sep 2022
<b>Coach Academy</b> , Competitive Programming Training - Level 2 <a href="#">🔗</a>	Sep 2022
<b>Coach Academy</b> , Competitive Programming Training - Level 1 <a href="#">🔗</a>	Sep 2022
<b>1 Million Arab Coders</b> , Full Stack Developer Track <a href="#">🔗</a>	Apr 2018

## 🛠 Skills




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- Good understanding of Object-Oriented, Functional, and Procedural programming paradigms.
- Proficient in **Python**, **C++**, **Java**, and **JavaScript**.
- Good understanding of Test-Driven Development (TDD), Unit, Integration, and End-to-End (E2E) testing.
- Good understanding of Agile methodologies, including Scrum, Kanban, and Extreme Programming (XP).
- Skilled in project management and collaboration tools (**Trello**) for Agile development.
- Good problem-solving skills with a competitive programming background.
- Good understanding of SOLID principles and design patterns for developing maintainable, scalable, and efficient software.
- Experience in Full-Stack Web Development using **Django**, **Flask**, **FastAPI**, **Express.js**, and **React.js**.
- Skilled in designing RESTful APIs.
- Good understanding of caching mechanisms, including **Redis** and CDN integration.
- Experience with relational and NoSQL databases (**Oracle**, **PostgreSQL**, **MariaDB**, **MongoDB**, **DynamoDB**).
- Good understanding of database optimization, sharding, and replication.
- Hands-on experience with AWS (**EC2**, **S3**, **Lambda**, **RDS**, **IAM**, **API Gateway** and more...) and Alibaba Cloud.
- Experience with **Docker**, **Docker Compose**, and Infrastructure as Code (IaC) using **AWS CloudFormation**.
- Experience with Machine Learning frameworks (**TensorFlow**, **PyTorch**, **Scikit-Learn**, **SageMaker**).
- Hands-on work with MLOps, model deployment, and AI system integrations.
- Proficient in data analytics using **Pandas**, **Plotly**, **Seaborn**, and **Matplotlib**.
- Research experience in NLP (published at ACL ArabicNLP Workshop).
- Cybersecurity experience (Participated on CTFs, ethical hacking, penetration testing).
- Good understanding of OWASP security principles and top web vulnerabilities.
- Good understanding of authentication protocols (**OAuth 2.0**, **JWT**).
- Good understanding of Linux internals, system administration, and shell scripting, with hands-on experience in building Linux from scratch (**Arch Linux** user since 2016).
- Good understanding of the OSI networking model with hands-on experience in network design and testing using **Packet Tracer**.
- Good understanding of networking protocols (**TCP**, **UDP**, **DNS**, **TLS**, **SSH** and more...) and tools (**Wireshark**, **iptables**, **tcpdump**).
- Experience in distributed computing and microservices architecture.
- Proficient in **Git**, **GitHub**, and version control best practices.

## Languages

- **Arabic - Native**
- **English - Professional working proficiency**

## Projects

<b>Nabigah</b> – (JavaScript, React.js, Express.js, Prisma ORM, PostgreSQL, Python, FastAPI, Docker)	Jan 2025 - Present
<ul style="list-style-type: none"><li>• Developed an AI-powered education platform where students can ask AI for help within each learning block if they don't understand the material.</li><li>• Built a comprehensive course management system to organize and manage courses, materials, and student interactions.</li><li>• Integrated rich content formats (Markdown, images, videos) for a more engaging and dynamic learning experience.</li><li>• Deployed using Docker across a multi-server architecture for scalability and reliability.</li><li>• System architecture:<ul style="list-style-type: none"><li>- <b>Frontend:</b> Built with React.js for a responsive and engaging user experience.</li><li>- <b>Backend:</b> Developed using JavaScript (Express.js) with Prisma ORM and PostgreSQL for efficient data management.</li><li>- <b>AI Services:</b> Powered by Python and FastAPI, utilizing DeepSeek for assessment and feedback.</li><li>- <b>Infrastructure:</b> Deployed with Docker across four dedicated servers (Authentication, AI, Backend, and Frontend).</li></ul></li></ul>	
<b>Shortener</b> – (Python, FastAPI, PostgreSQL, Redis, Docker)	
<ul style="list-style-type: none"><li>• Developed a high-performance URL shortener using FastAPI, PostgreSQL, and Redis.</li><li>• Integrated request validation and security measures for safe and efficient URL handling.</li><li>• Containerized using Docker for seamless deployment and scalability.</li></ul>	
<b>EcoRoute</b> – (Python, FastAPI, Pandas, TimeFold,...)	
<ul style="list-style-type: none"><li>• Developed an AI-powered distributed system for truck load balancing and route optimization, utilizing FastAPI and TimeFold for efficient processing.</li><li>• Leveraged Pandas for data processing and analysis to optimize decision-making for route planning and resource allocation.</li><li>• Designed to enhance efficiency in truck logistics and transportation, reducing costs and improving delivery times.</li></ul>	
<b>Exam Organization Simulation</b> – (Blender, Godot)	May 2023 - Sep 2023
<b>Tech Teacher</b> – (Python, Django, OpenAI)	
<b>Faculty Management Specialization (FMS)</b> – (C#, ASP.net Core MVC, Hangfire)	Dec 2022 - Jun 2023
<b>Faculty Scholarship Flow</b> – (C#, Hangfire)	May 2023 - Jun 2023
<b>University Hierarchy</b> – (Python, Pandas, Plotly, MS Excel, PowerBI)	Mar 2023 - May 2023

## Publications

<b>MISSION at KSAA-CAD 2024: AraT5 with Arabic Reverse Dictionary</b> <b>THAMER ALHARBI</b> 2024.arabicnlp-1.76 	Aug 16, 2024
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