

Ali Ghanati

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📍 Eindhoven, Netherlands

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## EDUCATION

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- **M.Sc. in Embedded Systems** **2024 - Present**  
Eindhoven University of Technology  
CGPA: N/A
- **B.Sc. in Computer Engineering** **2018 - 2023**  
Sharif University of Technology (Best University in Iran)  
CGPA: 15.19/20 (Last 2 years CGPA: 16.45/20)  
Thesis Title: Design and implementation of local IoT gateway protocols on microcontroller-based systems  
Brief Description: In this thesis, I extensively examined five distinct communication protocols, implemented them on Raspberry Pi devices, created scripts for data collection in various scenarios, and conducted a thorough analysis of the results. The objective was to illuminate the strengths and weaknesses of each protocol, offering insights to guide individuals in choosing the most suitable one for their specific needs. Additionally, the study aimed to deepen understanding and provide a foundation for future students researching this topic.  
Thesis Supervisor: Dr. Mohsen Ansari

## HONORS & ACHIEVEMENTS

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- Member of Iran's National Elites Foundation (INEF)
- Ranked 60th among 144 thousands (top 0.1%) in national university entrance exam
- Member of National Organization for Development of Exceptional Talents (NODET)

## WORK EXPERIENCE

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- **Test Engineer** **Sep 2024 – Mar 2025 (Part-time)**
  - ★ **Smit Thermal Solutions:** Developer and manufacturer of high-quality equipment for thermal processes.
  - ★ Collaborated with a software engineering team to test the control software of an industrial oven.
  - ★ Learned to use multiple tools like Cordis Suite, digital twins, HMI and etc along the way.
- **Software Engineer** **Sep 2023 – Aug 2024**
  - ★ **Akka:** A Decentralized Exchange Aggregator
  - ★ Worked on a Nest.js project that wrapped the main product APIs and transformed them into a more desired structure.
  - ★ Implemented a Referral system on the previously mentioned Nest.js project.
  - ★ Designed a cron job to update database using Nest.js task scheduling package, as well as having the option to trigger this update manually using a protected API endpoint (only accessible to admin users).
  - ★ Worked on a dapp (decentralized app), using technologies like Turborepo and to give users a interface to interact with the Nest.js backend.
  - ★ Helped develop an SDK for calling the Nest.js APIs and publish it on npm.
  - ★ Developed a sample frontend project showcasing the usage of the SDK.
  - ★ Developed a Node.js script for gathering data from some liquidity pools and saving them in Redis.

- **Full Stack Engineer** **Jun 2022 – Oct 2023 (Part-time)**
  - ★ **Kangonio:** A online book shop
  - ★ Maintained an application that featured a fully functioning online shop as well as providing APIs for public use (SaaS).
  - ★ Implemented discount codes, having the option to choose between percentage discount or amount discount, unlimited time or limited time and etc.
- **Full Stack Engineer** **Jun 2022 – Oct 2023 (Part-time)**
  - ★ **Twelve Group:** An innovative CRM
  - ★ Worked on a WordPress plugin to import Woo-Commerce user data to our own database, learned to code with PHP and got familiar with WordPress database structure (MySQL).
  - ★ Deployed & developed new features for an existing backend project (Node.js, Express.js, PostgreSQL).
  - ★ Completely redesigned the front side of this project using React.js, MUI & Recoil.js.
  - ★ Collaborated remotely with a UI/UX Designer to get this job done.
- **Frontend Developer** **Sep 2021 – May 2022**
  - ★ **Asan Bourse:** A company offering various digital services for traders & stock-holders of the stock market of Iran
  - ★ Developed a PWA called the "Alarm App" Using Nuxt.js. This app was a web application with primary focus on mobile device users which notified people of user defined events that could occur in the stock market.
  - ★ Worked with android studio to export the Alarm App as an android app.
- **Full Stack Developer** **Dec 2020 – May 2021**
  - ★ **Weblite:** An startup founded in Sharif University of Technology
  - ★ participated in an online course, & learned about HTML, CSS, JavaScript, Node.js, Express.js, PostgreSQL, MongoDB & Vue.js as an entry requirement.
  - ★ Developed a version of the famous UNO game with Vue.js, Express.js & MongoDB as the final project for the mentioned course.
  - ★ Developed a micro frontend application using React.js called "paper" which was deployed on a messenger called weblite (Developed by this team).

## PROJECTS

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- **Gamein 2022: Frontend, Backend & Operations** — A simulation game where participants compete to bring a business to success from scratch by managing factory lines and trading with other players. Technologies used: Spring boot, React.js, PostgreSQL, Docker, NGINX.
- **Smart Home: Embedded Systems Course Project** — A project with 3 modules and a main hub for access control. Connected three Arduinos via ESP8266 for home automation tasks and monitored by a Raspberry Pi web application. Technologies used: Arduino, Raspberry Pi, ESP8266, Nuxt.js.
- **Twelve Work: Frontend, Backend & Operations** — A CRM software designed for customer information organization, behavior analysis, and interaction, primarily for online shops. Integrated a plugin for data import from WordPress (Woo-Commerce) shops. Technologies used: Node.js, Express.js, React.js, WordPress & Plugins (w/ PHP).
- **Webelopers 2022: Frontend** — An application for event registration, team selection, learning materials access, and event timeline display for a student-organized web development event. Technologies used: React.js, Next.js.
- **WSS Site: Full Stack & Database Administration** — A complete website setup for displaying seminar, workshop, and event details. Technologies used: Django, React.js, Postgresql, Docker, NGINX.
- **Alarm App: Frontend** — A web application for defining customized financial alarms and user notifications, optimized for mobile devices. Technologies used: Vue.js, Nuxt.js.

- **Record Tracker: Frontend**  — A web application for tracking and calculating archery practice records. Technologies used: Vue.js, Nuxt.js.
- **Chess Game: Python Application**  — A two-player chess game developed in Python.
- **Mine Sweeper Game: Frontend**  — An implementation of the classic game using basic frontend technologies. Technologies used: HTML, CSS, JavaScript.

## SIGNIFICANT ROLES

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| • <b>Full Stack Developer &amp; Software Architect @ Gamein 2022</b><br>Sharif University of Technology, Industrial Engineering Department | <b>Oct 2022 - May 2023</b> |
| • <b>Teaching Assistant @ Python Lab Course (3 Semesters)</b><br>Sharif University of Technology, Electrical Engineering Department        | <b>Oct 2021 - Feb 2023</b> |
| • <b>Technical Head @ 7th WSS</b><br>Sharif University of Technology, Computer Engineering Department                                      | <b>Nov 2021 - Mar 2022</b> |
| • <b>Arduino Workshop &amp; Competition Organizer @ HardWar 2022</b><br>Sharif University of Technology, Computer Engineering Department   | <b>May 2022</b>            |

## CERTIFICATIONS

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- IBM Applied DevOps Engineering - Issued by IBM (Coursera)
- Introduction to Cloud Computing - Issued by IBM (Coursera)
- Developing AI Applications with Python and Flask - Issued by IBM (Coursera)
- Introduction to Containers w/ Docker, Kubernetes & OpenShift - Issued by IBM (Coursera)
- Python for Data Science, AI & Development - Issued by IBM (Coursera)
- Introduction to Agile Development and Scrum - Issued by IBM (Coursera)
- Hands-on Introduction to Linux Commands and Shell Scripting - Issued by IBM (Coursera)
- Introduction to DevOps - Issued by IBM (Coursera)
- Getting Started with Git and GitHub - Issued by IBM (Coursera)
- Introduction to Software Engineering - Issued by IBM (Coursera)
- Django Application Development with SQL and Databases - Issued by IBM (Coursera)
- Backend Application Development Capstone Project - Issued by IBM (Coursera)
- Continuous Integration and Continuous Delivery (CI/CD) - Issued by IBM (Coursera)
- Introduction to Test and Behavior Driven Development - Issued by IBM (Coursera)
- DevOps Capstone Project - Issued by IBM (Coursera)
- Monitoring and Observability for Development and DevOps - Issued by IBM (Coursera)
- Application Development using Microservices and Serverless - Issued by IBM (Coursera)
- Application Security for Developers and DevOps Professionals - Issued by IBM (Coursera)
- Game Theory - Issued by Stanford University (Coursera)
- Advanced Python Programming and Object-oriented Thinking - Issued by Quera
- Task-oriented Course in Linux - Issued by Quera

## VOLUNTEER SERVICES

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- Member of Central Council of university's Literature & Poems Club for 3 years
- Editor for multiple magazines in Sharif University of Technology
- Presenter of programming workshops for freshman students