





# KIANA GHASSABI

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## ABOUT ME

I'm a PhD student in Computer Engineering with a focus on machine learning for time series forecasting and anomaly detection. I have a background in IoT, embedded systems, and data systems engineering, and I'm experienced in processing and modeling real-world data from sensor networks.

## EDUCATION

Aarhus University

2024 - Present

### PhD in Computer Engineering

**Thesis topic:** Goal-oriented Semantic Communication for Internet of Things

- Utilizing advanced machine learning, data mining, and deep learning techniques.

IASBS, Zanjan, Iran

2020 - 2023

### M.Sc. in Computer Science

**Thesis topic:** Improving the Efficiency of Secure Data Deduplication Methods in Cloud Storage Services.

- Covered advanced topics in machine learning, data mining, cryptography, and
- Studied the design and optimization of secure and scalable storage systems.
- Gained expertise in algorithm design, computational complexity, distributed systems, and large-scale data processing.
- Published research papers in journals and conferences.

IASBS, Zanjan, Iran

2016 - 2020

### B.Sc. in Information Technology Engineering

**Thesis topic:** Improving the Decoding Speed of Packet Recovery in Network Coding.

- Focused on foundational concepts in database management systems, operating systems, programming, and software engineering.
- Worked on projects involving system design, data structures, and algorithms.
- Explored real-world applications to optimize performance and reliability.

## TEACHING EXPERIENCE

**Aarhus university**

[Aarhus, Denmark]

### Teaching Assistant

**Responsibilities:** Teaching, Holding Office Hours, Preparing Course Materials.

**IASBS**

[Zanjan, Iran]

- |   |            |
|---|------------|
| • <b>Communication Systems</b>   Bachelors level ,  | 2025       |
| • <b>Advanced Computer Networks</b>   Masters Level | 2022, 2023 |
| • <b>Network Coding</b>   Masters Level             | 2020, 2021 |
| • <b>Network Security</b>   Masters Level           | 2022       |
| • <b>Computer Networks</b>   Bachelors level        | 2019, 2021 |

## WORK EXPERIENCE

### Wireless Communication Lab, IASBS

[Zanjan, Iran]  
2020 – 2023

#### RESEARCHER

- Designed data deduplication techniques that improved cloud storage efficiency (~66% compression).
- Explored network coding to improve system reliability in wireless communications.
- Collaborated in a cross-functional research team and mentored junior peers.

### IoT Lab, IASBS

[Zanjan, Iran]  
2017- 2019

#### Embedded System Engineer

- Developed an LPWAN-based data monitoring system for HVAC, reducing energy usage by 60%.
- Handled end-to-end system programming using Raspberry Pi and Arduino.
- Demonstrated lab prototypes and software at industry exhibitions.

### Sarve Saba

[Zanjan, Iran]  
2016- 2017

#### Marketing Trainee

- Researched and analyzed market trends to identify emerging industry needs.
- Developed and implemented targeted marketing strategies to align with market demands.
- Monitored competitor activities to assess market positioning and identify opportunities for growth.

### MetaverseAlliances

[Tehran, Iran]  
2021 - 2022

#### Research and Development Team Lead

- Conducted analytical research on metaverse platforms, NFTs, and data trends.
- Designed a white paper outlining key strategies.
- Led team meetings to coordinate goals and progress tracking.

### Beyondmegasoft

[London, England]  
2019- 2020

#### RESEARCHER

- Designed and modeled token ecosystems with strong focus on user engagement metrics.
- Developed data-driven DeFi models (staking, lending, liquidity) aligned with market demand.

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## SKILLS

### Languages

- Farsi (Native)
- Turkish (Native)
- English (Professional Proficiency)
- Danish (Beginner)

### Programming Languages

- Python (Professional)
- C++ (Professional)
- R (Intermediate)
- Microcontroller Programming (Intermediate)
- MATLAB (Intermediate)
- Powershell (Beginner)

### Data Science

- Data Visualization Tools (Power BI, Matplotlib, Seaborn)
- Data Analysis
- Machine Learning Algorithms (Time series forecasting, supervised/unsupervised learning, and predictive modeling)

### Technical

- LaTeX (Expert)
- IoT Sensors and Modules
- Version Controls (Git, GitHub)
- Qt Programming
- Microcontrollers
- Database Management
- Data Visualization
- Microsoft Office (Excel, Powerpoint)

### Soft

- Analytical Thinking
  - Flexibility
  - Continuous Learning
  - Self-Motivation
  - Collaboration
  - Conflict Resolution
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## PUBLICATIONS

1. **K. Ghassabi**, P. Pahlevani, "DEDUCT: A Secure Deduplication of Textual Data in Cloud Environments", in IEEE Access, May 2024, doi: 10.1109/ACCESS.2024.3402544.

2. **K. Ghassabi**, P. Pahlevani and D. Lucani, "Deduplication of Textual Data by NLP Approaches," at 2023 IEEE 97th Vehicular Technology Conference (VTC2023-Spring), Aug. 2023, doi: <https://doi.org/10.1109/VTC2023-Spring57618.2023.10199538>.

3. H. K. Nazari, **K. Ghassabi**, P. Pahlevani and D. Lucani, "Improving the Decoding Speed of Packet Recovery in Network Coding," in IEEE Communications Letters, vol. 25, no. 2, pp. 351-355, Feb. 2021, doi: 10.1109/LCOMM.2020.3031011.

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