Farhad Aman

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EDUCATION

Amirkabir University of Technology, Bachelor of Science in computer engineering   Sep 2020 – Present
- GPA: 18.12 / 20 (3.80/4) (Transcript)
- **Thesis:** Energy-aware transformers under the supervision of Professor Momtazi

Hasheminejad High School of Exceptional Talents, Diploma of mathematics and   Sep 2014 – Sep 2020
physics
- GPA: 19.35 / 20

SELECTED COURSES

- Algorithm Design 20 / 20
- Data Structures and Algorithms 20 / 20
- Information Retrieval 19.55 / 20
- Artificial Intelligence 17.5 / 20
- Applied Linear Algebra 17.08 / 20
- Engineering Statistics 18.35 / 20
- Discrete Mathematics 19.5 / 20
- Principles of Cloud Computing 20 / 20
- Operating Systems 19.69 / 20

- Advanced Programming 20 / 20
- Principles of Database Design 18.5 / 20
- Microprocessor and Assembly Language 20 / 20
- Software Engineering II 20 / 20
- Web Programming 20 / 20
- Logic Circuits 19.9 / 20
- Fundamentals of Computer Programming 20 / 20
- Computer Architecture 17.97 / 20

RESEARCH & WORK EXPERIENCE

Research Assistant (NLP Lab), Amirkabir University of Technology   Sep 2023 – Present
- I contributed to optimizing transformer models for reduced energy consumption under Professor Momtazi's supervision. My research focuses on improving the energy efficiency of NLP models by developing techniques that balance computational complexity and resource use, making transformers more sustainable for deployment in resource-constrained environments.

Research and Development, Snapp   Apr 2022 – Present
- Estimated Time of Arrival (ETA) Optimization: At Snapp, the leading ride-hailing platform in Iran, I work under Sadegh Etemad's supervision to improve the accuracy of the estimated time of arrival (ETA) predictions. Using advanced machine learning models, including XGBoost, neural networks, and routing engines, my role focuses on developing and deploying models with MLOps tools and software solutions to enhance real-time ETA predictions, contributing to more efficient and reliable operations at scale.
- Skills: Machine Learning (TensorFlow, XGBoost, Neural Networks), Routing Engines (OSRM, Valhalla, Graph Hopper), MLOps and DataOps Tools (ML-Flow, Kedro, Air-Flow, ONNX), Apache Spark, Apache Kafka

TEACHING EXPERIENCE

- Software Engineering teaching assistant under the supervision of Professor Gohari (Sep 2024)
- Data Mining teaching assistant under the supervision of Professor Nazerfard (Feb 2024)
- Data Structures and Algorithms teaching assistant under the supervision of Professor Shirali (Feb 2024)
- Linear Algebra teaching assistant under the supervision of Professor Mazlaghani (Feb 2024)
- Computer Networks teaching assistant under the supervision of Professor Ziaei (Feb 2024)
- Artificial Intelligence teaching assistant under the supervision of Professor Javanmardi (Feb 2024)
- Web Programming teaching assistant under the supervision of Professor Alvani (Feb 2024)

- Operating Systems teaching assistant under the supervision of Professor Javadi (Sep 2023)
- Algorithm Design teaching assistant under the supervision of Professor Javanmardi (Sep 2023)
- Data Structures teaching assistant under the supervision of Professor Shirali (Sep 2023)
- Artificial Intelligence teaching assistant under the supervision of Professor Javanmardi (Sep 2023)
- Advanced Programming teaching assistant under the supervision of Professor Ziaei (Sep 2023)
- Microprocessor and Assembly Language teaching assistant under the supervision of Professor Farbeh (Sep 2023)
- Operating Systems teaching assistant under the supervision of Professor Javadi (Feb 2023)
- Algorithm Design teaching assistant under the supervision of Professor Shirali (Feb 2023)
- Data Structures and Algorithms teaching assistant under the supervision of Professor Shirali (Feb 2023)
- Advanced Programming teaching assistant under the supervision of Professor Roustaei (Sep 2022)
- Advanced Programming teaching assistant under the supervision of Professors Zeinali and Kalbasi (Feb 2022)
- Programming Fundamentals teaching assistant under the supervision of Professor Zeinali (Sep 2021)

PROJECTS

Multi-User Drawing Tool   github.com/name/repo
- Developed an electronic classroom where multiple users can view and simultaneously draw on a "chalkboard" with each person's edits synchronized
- Tools Used: C++, MFC

Synchronized Calendar   github.com/name/repo
- Developed a desktop calendar with globally shared and synchronized calendars, allowing users to schedule meetings with other users
- Tools Used: C#, .NET, SQL, XML

Operating System   2002
- Developed a UNIX-style OS with a scheduler, file system, text editor, and calculator
- Tools Used: C

HONORS & AWARDS

- Ranked 220th/155K: In the national university entrance exam among 155 thousand students (2020)
- Ranked 60th in the 29th Iran's National Olympiad in Informatics

TECHNICAL SKILLS

- **Programming Languages**: Python, C, C++, Java, Golang, Scala
- **Data Science and Machine Learning Frameworks**: TensorFlow, PyTorch, Keras, Scikit-learn, NumPy, Pandas, Matplotlib, XGBoost, LightGBM, Apache Spark, DVC
- **Databases and Data Storage**: PostgreSQL, MySQL, Cassandra, ksqlDB, Redis, ClickHouse, SQLite, ElasticSearch
- **MLOps and DataOps Tools**: ONNX, Kedro, MLflow, Airflow, S3, Hadoop, Logstash
- **Cloud and Containerization**: Docker, Kubernetes, Helm, OpenShift, Nginx, Apache Kafka, Kafka Streams, ArgoCD
- **CI/CD and DevOps**: Git, GitLab, Jenkins, Prometheus, Grafana, Kibana, Terraform
- **API Development and Testing Tools**: FastAPI, OpenAPI, Postman, Insomnia, Swagger
- **Messaging and Event Streaming**: NATS, RabbitMQ, Apache Kafka
- **Testing and Automation**: Selenium

EXTRACURRICULAR & VOLUNTEERING ACTIVITIES

Head of Linux and Open Festival 2024, Amirkabir University of Technology   Feb 2024
- Organized and led one of the most prestigious academic events focused on Linux, featuring workshops, presentations, and networking opportunities for students and professionals.

Technical Head of Amirkabir Artificial Intelligence Summer Summit 2023,   Sep 2023
Amirkabir University of Technology
- Responsible for preparing the website of the event.

Technical Head of ICPC 2023, Amirkabir University of Technology   Oct 2023
- Managed judge servers and participant systems for the ICPC contest.

Technical Staff of ICPC 2022, Amirkabir University of Technology   Apr 2023
- Prepared website and managed systems for judges and participants during the ICPC contest.

Author of Advanced Programming Workshop, Amirkabir University of Technology   Jul 2021 – Jan 2022
- Developed and prepared content for the Advanced Programming Workshop.

ONLINE COURSES

- **Natural Language Processing Specialization**, DeepLearning.AI on Coursera (Courses: NLP with Classification and Vector Spaces, NLP with Probabilistic Models, NLP with Sequence Models, NLP with Attention Models)
- **Machine Learning Specialization**, Stanford University on Coursera

REFERENCES

- **Saeedeh Momtazi**, Associate Professor
  Email: momtazi@aut.ac.ir
- **Sajad Shirali Shahreza**, Assistant Professor
  Email: shirali@aut.ac.ir
- **Ehsan Nazerfard**, Assistant Professor
  Email: nazerfard@aut.ac.ir
- **Hamed Farbeh**, Assistant Professor
  Email: farbeh@aut.ac.ir
- **Seyyed Ahmad Javadi**, Assistant Professor
  Email: sajavadi@aut.ac.ir