

Erfan Nourbakhsh

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EXPERIENCE

University Instructor, University of Texas at San Antonio (UTSA)	<i>Aug 2025 - Present</i>
<ul style="list-style-type: none">Taught CS 2113: Fundamentals of OOP, focusing on encapsulation, abstraction, modularity, and polymorphism.Guided students in problem analysis and coding solutions with Java classes and objects.Introduced computational complexity concepts to evaluate and compare algorithm efficiency.	
Research Assistant, University of Texas at San Antonio (UTSA)	<i>May 2025 - Present</i>
<ul style="list-style-type: none">Enhanced software accessibility by investigating update regressions affecting blind and motor-impaired users and formulating mitigation guidelines.Improved OSS feature requests using DFG-based code summaries and GPT-4o.Advanced cognitive load detection by applying ResNet and transformer-based models to ECG signals, achieving 82.8% accuracy on the CLARE dataset.	
Graduate Research Assistant, University of Isfahan	<i>Sep 2023 - Dec 2024</i>
<ul style="list-style-type: none">Designed a low-code platform to automatically generate chatbots, reducing manual development effort.Automated chatbot creation from user-provided designs, improving accessibility and usability.Built chatbots across multiple categories using LLMs.	
Artificial Intelligence Specialist, Directam	<i>Jun 2024 - Oct 2024</i>
<ul style="list-style-type: none">Integrated AI models into applications, improving scalability and reducing deployment issues.Developed NLP-driven systems to analyze Telegram interactions, enhancing customer feedback analysis.Built AI solutions: Persian Car ASR, Instagram Comment Generator, and OCR-based Fortune Wheel Recognition.	
Artificial Intelligence Strategy Consultant, Pezeshke Khoob	<i>Aug 2024 - Sep 2024</i>
<ul style="list-style-type: none">Guided AI-focused data preparation and analysis, reducing processing time.Designed recommender systems, improving customer engagement.Aligned predictive modeling with strategic decision-making.	
Machine Learning Engineer, Eftekhar Modiran	<i>Mar 2023 - Sep 2023</i>
<ul style="list-style-type: none">Developed EftekharTalent, an ML and deep learning powered system for job search and candidate matching.Collaborated with psychology and management teams to integrate personality tests into matching.Optimized PyTorch neural networks, improving matching accuracy.	
Undergraduate Research Assistant, University of Isfahan	<i>Nov 2022 - Feb 2024</i>
<ul style="list-style-type: none">Built a document summarization system combining GNNs with BiLSTM and CNN models.Applied Graph Attention Networks (GATs) to update semantic relationships.Designed a summarization classifier to select the most informative sentences.	
Machine Learning Intern, Vitraco	<i>Jul 2022 - Sep 2022</i>
<ul style="list-style-type: none">Built a recommendation system with PyTorch and scikit-learn to match loads with drivers.Applied NLP and data mining to analyze driver feedback.Refined recommendation algorithms with real-world data, improving assignment accuracy.	
Frontend Developer Intern, Safir	<i>Aug 2020 - Jan 2021</i>
<ul style="list-style-type: none">Designed and implemented Digipie with ReactJS and TypeScript, streamlining content evaluation.Developed CSR and SSR applications, maintaining quality standards.Optimized Digipie's design, improving employee adoption and workflow efficiency.	

EDUCATION

Ph.D. in Computer Science	<i>January 2025 - Present</i>
University of Texas at San Antonio (UTSA)	

SKILLS

Programming Languages: Python, SQL, JavaScript, Java, C, C++, Bash, Ruby on Rails, TypeScript, Go
Data Analysis & Machine Learning: Pytorch, Pytorch Geometric, Tensorflow, OpenCV, Data Analysis, Data Visualization, A/B Testing, Hypothesis Testing, Regression, Segmentation, Experimentation, Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, Apache Spark, PySpark, dbt, Airflow, Tableau, Power BI
Testing Tools: JUnit, Mockito, Pytest, RSpec, Jest
Mobile Development: Java, Android Studio, Flutter, XML, Swift
Software Engineering & Practices: Object-Oriented Programming (OOP), REST APIs, Web Development (HTML, CSS, JavaScript React.js, Node.js), SDLC, Git, GitHub, CI/CD Pipelines, Docker, Kubernetes (basics), Linux/Unix
Tools & Platforms: AWS (S3, Lambda, Redshift), GCP, Azure, MySQL, PostgreSQL, MongoDB, Jupyter, VS Code, Postman, Figma, Prometheus, CDN, Terraform, Containerization, Go, Rust, Elasticsearch, Redis, Snowflake