

# Sajad Sarlaki

Calgary, AB, Canada

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## Research Interests

Assistive technologies; human–computer interaction (HCI); accessibility and autism support technologies; adaptive learning systems; software systems and performance; applied machine learning for education and health.

## Education

**University of Calgary**, Calgary, Canada

**M.Sc. in Electrical and Software Engineering** (Thesis-based)

*January 2025 – Present*

- Research group: ETHEREAL Research Group
- Focus: Designing and evaluating assistive typing and communication systems for nonspeaking autistic individuals using adaptive interfaces, computer vision, and AI-driven feedback

**Amirkabir University of Technology (Tehran Polytechnic)**, Tehran, Iran

**Bachelor of Science (B.Sc.) in Computer Engineering**

*September 2017 – March 2022*

- GPA: 17/20

## Teaching Experience

**University of Calgary**, Calgary, Canada

**Graduate Teaching Assistant**

*January 2025 – Present*

- ENEL 353 – Circuit Design
- ENCM 369 – Computer Organizations
- ENSF 619 – Full-Stack Development
- SENG 533 – Software Performance Evaluation
- SENG 438 – Software Quality, Reliability, and Testing
- Led tutorials and laboratory sessions; assisted students with technical problem-solving; graded assignments, labs, projects, and presentations

**Amirkabir University of Technology**, Tehran, Iran

**Teaching Assistant**

*2019 – 2021*

- Advanced Programming
- Signals and Systems
- Computational Intelligence

- Designed and graded assignments and quizzes; provided academic and technical support

## Publications & Scholarly Outputs

- **Co-Designing Assistive Technologies with Nonspeaking Autistic Collaborators.** *ACM Designing Interactive Systems (DIS)* — Submitted.
- **Insights from the Inside: Ethical Co-Design of Technology for and with Nonspeaking Autistic People.** *INSAR Annual Meeting* — Abstract accepted (poster presentation).
- **When Speech Isn't the Default: Co-Designing Communication Access and Shared Authority in Higher Education.** *CUNY Conference on Human Information Interaction and Retrieval (CHIIR/CUNY)* — Abstract submitted.

## Research & Professional Experience

**BAYAN**, Tehran, Iran

### Front-End Developer

*May 2022 – 2024*

- Modernized legacy front-end codebases
- Developed mailbox and administrative interfaces
- Worked with SMTP, POP3, IMAP protocols
- Technologies: React, Redux, Django, Redis

**UTOPIA**, Tehran, Iran

### Co-Founder & Developer

*August 2018 – April 2022*

- Co-designed and implemented an agricultural technology platform
- Developed web and mobile applications
- Mentored undergraduate interns in modern front-end practices

## Projects (Selected)

### Adaptive Typing and Communication Support System (Ongoing)

Research-driven assistive typing platform integrating a tablet UI, custom RGB keyboard cues, audio feedback, and computer vision-based interaction. Project overview

### Aragorn-js

JavaScript library for creative and educational 2D content using WebGL (B.Sc. final project).  
GitHub repository

### Project Collections

projects spanning computational intelligence, data mining, networks, databases, and machine learning. GitHub projects: [1] [2] [3] [4] [5]

## Skills

**Programming & Software Development:** JavaScript, Python, Java, Node.js, Express

**Web & Mobile Development:** React, React Native, HTML5, CSS3, SCSS/Sass, Redux

**Systems & Tools:** Git, Webpack, REST APIs, Redis, Django

**Design & Prototyping:** Figma

**Methodologies:** Agile/Scrum, responsive design, software testing fundamentals

## Service, Leadership & Community Engagement

### Community-Based & Participatory Engagement

- Volunteer participant in the University of Calgary Beast Mode program, supporting inclusive wellness, regulation, and peer engagement
- Organized and facilitated accessible co-design meetings and informal community social sessions

### Academic, Technical & Entrepreneurial Leadership

- Co-founder of an early-stage technology startup (UTOPIA)
- Organized technical workshops and knowledge-sharing sessions
- Mentored undergraduate interns in industry and academic settings
- Academic and technical service through graduate teaching assistant roles and open-source contributions

## Languages

English (Professional) Persian (Native)