REZA KHAN MOHAMMADI

rezanecessary@gmail.com   ◇   [ledengary.github.io]

EDUCATION

University of Guilan   Sep 2017 - Aug 2021

· B.Sc in Computer Engineering, GPA: 18.36/20 (3.86/4)
[Thesis:] *Prose2Poem: The blessing of Transformers in Translating Prose to Persian Poetry*

TECHNICAL STRENGTHS

Technical Expertise	Artificial Intelligence, Brain-Machine Interfaces, Machine Learning, Natural Language Processing, Signal Processing
Non-Technical Expertise	Innovation, Leadership, Management, Problem-Solving, Public-Speaking
Computer Languages	C/C++, Java, MATLAB, Python, VHDL
Web Development Tools	CSS, Django, HTML
Data Science Tools	Jupyter Notebook, Numpy, Pandas, scikit-learn, SQL
Artificial Intelligence Tools	Hugging Face, Keras, PyCharm, PyTorch, Tensorflow

RESEARCH ASSISTANT EXPERIENCES

- Human Augmentation and Artificial Intelligence Laboratory   Jul 2021 - Present
AI Researcher @ HAAIL - under supervision of [Dr. MM. Ghassemi]

Projects: • *Brain-Machine Interface* • *Fetal Gender Identification*

- Georgia Southern University   Mar 2020 - Jun 2020
NLP Researcher - under supervision of [Dr. M. Allahyari]

Projects: • *Document ranking using Transformers*

- Guilan NLP Group   Sep 2019 - Present
NLP Researcher [Webpage] - under supervision of [Dr. S. A. Mirroshandel]

Projects: • *Bilingual Image Captioning* • *Persian Text Style Transfer* • *Persian Poetry Generation* • *Persian Abstractive Summerization* • *Persian Text Style Transfer*

RESEARCH PAPERS

Fetal Gender Identification using Machine and Deep Learning Algorithms on Phonocardiogram Signals - (Under Review)
R. Khanmohammadi, MS. Mirshafiee, MM. Ghassemi, T. Alhanai   [Pre-print]

Prose2Poem: The blessing of Transformers in Translating Prose to Persian Poetry - (Under Review)
R. Khanmohammadi, MS. Mirshafiee, YR. Jouryabi, SA. Mirroshandel   [Pre-print]

COPER: a Query-adaptable Semantics-based Search Engine for Persian COVID-19 Articles - (Published)   DOI: 10.1109/ICWR51868.2021.9443151
R. Khanmohammadi, MS. Mirshafiee, M. Allahyari   [IEEE Xplore] [arXiv] [Video Presentation]

PGST: a Persian Gender Style Transfer method - (Under Review)
R. Khanmohammadi, SA. Mirroshandel   [Pre-print]

Text Style Transfer in Persian Language using Deep Learning
R. Khanmohammadi, SA. Mirroshandel [Pre-print]

HONORS & AWARDS

Most Active Committee chair <div align="right">Oct 2021</div>
University of Guilan

Exceptional Talent <div align="right">Aug 2020</div>
University of Guilan

Active Student Ambassador <div align="right">Jan 2020</div>
International University Sports Federation (FISU)

National Representative <div align="right">Aug 2019</div>
National University Sports Federation of I.R. Iran

Full Scholarship, B.sc, University of Guilan <div align="right">Aug 2017</div>
University of Guilan

LEADERSHIP EXPERIENCES

Rasht School of AI (www.schoolofai.ir) <div align="right">Dec 2020 - Present</div>
Leader <div align="right">*Rasht, Iran*</div>

Brain and Cognition Association of the University of Guilan <div align="right">Oct 2020 - Present</div>
Head of Artificial Intelligence Committee <div align="right">*Rasht, Iran*</div>

Scientific Association of the Computer Engineering Department <div align="right">Oct 2020 - Present</div>
Head of Research Affairs <div align="right">*Rasht, Iran*</div>

National Olympiad Volunteer committee <div align="right">Sep 2019 - Present</div>
Vice-Chairman <div align="right">*Rasht, Iran*</div>

International University Sports Federation (FISU) <div align="right">Sep 2019 - Sep 2020</div>
Iran's FISU Student Ambassador - [Alumni Profile] <div align="right">*Iran*</div>

VOLUNTEERING EXPERIENCES

Mentorship <div align="right">Dec 2020 - Present</div>
School of AI

Data Engineering <div align="right">Summer 2020</div>
Physical education and Sport Sciences faculty of the University of Guilan

Web Application <div align="right">Fall 2017</div>
Physical education and Sport Sciences faculty of the University of Guilan <div align="right">*Rasht, Iran*</div>

TEACHER ASSISTANT EXPERIENCES

Natural Language Processing <div align="right">Spring 2021</div>
Instructor: Dr. Y. Boreshban <div align="right">*Head TA*</div>

Computational Intelligence <div align="right">Spring 2020 / Fall 2020 / Spring 2021</div>
Instructor: Dr. A. Turani <div align="right">*Head TA*</div>

Language Theories and Automata   Spring 2020
Instructor: Dr. SM. Shekarian   *TA*

Data Structures and Algorithm Design   Fall 2019
Instructor: Dr. SA. Mirroshandel   *Head TA*

Advanced Programming   Spring 2019 / Fall 2019
Instructor: Dr. SA. Mirroshandel   *Head TA*

Basics of Computer and Programming   Fall 2018
Instructor: Dr. SM. Shekarian   *TA*

Specialized English for engineering students   Spring 2018
Instructor: Dr. M. Shakeri   *TA*

CERTIFICATIONS

- **Certificate of Oral Presentation** - International Conference on Web Research (ICWR) - May 2021 - [Certificate]
- **Artificial Intelligence School** - Institute for Research in Fundamental Sciences - Aug 2020 - [Certificate]
- **FISU Student Ambassador** - International University Sports Federation (FISU) - Sep 2019 - [Certificate]
- **Neuroscience, Cognitive Sciences and Philosophy summer school** - Sharif University of Technology - Sep 2019 - [Certificate]
- **Deep Learning Specialization** - Coursera, Instructor: Andrew Ng - Aug 2019 - [Certificate]
- **Machine Learning Course** - Coursera, Instructor: Andrew Ng - May 2019 - [Certificate]
- **Introduction to Data Science in Python course** - Coursera, Instructor: Christopher Brooks - Apr 2019 - [Certificate]
- **Basketball Coaching Liscense (Grade 3)** - Iran Basketball Federation - Apr 2019 - [Certificate]
- **Python Advanced Course** - University of Tehran - Aug 2018 - [Certificate]
- **Web Development Specialization** - Tehran Institute of Technology - Jul 2016 - [Certificates]

SELF ACCOMPLISHED PROJECTS

- **Epileptic EEG Signal Processing** [Repository]
In this project, I experimented with Bonn University's Epilepsy EEG signals dataset to classify epileptic and non-epileptic EEG signals.
- **Motor Imagery Brain-Computer Interfaces:** [Repository]
In this project, I have experimented with the BCI Competition IV Dataset to classify body movements.
- **Bilingual image captioning with Multi-task Learning** [Repository]
I implemented multiple methods to experiment with the effect of multi-task learning in bilingual (Persian - English) image captioning.
- **Vehicle Type Classification** [Repository]
By relying on the power of Transfer Learning, I developed a model to classify vehicles as Light (e.g., car) or Heavy (e.g., truck).
- **Author Gender Identification** [Repository]
Experimented with multiple neural networks architectures to classify author's gender in Persian text as either Male/Female.
- **Stanford CS224n 2019 Natural Language Processing with Deep Learning assignments**
Implemented all 5 Assignments in Pytorch.

PRESENTATIONS

Introduction to Machine Learning   Jun 2021
Rasht School of AI   [Slides] [Video]

Introduction to Artificial Intelligence   Apr 2021
Rasht School of AI   [Slides] [Video]

Introduction to Natural Language Processing   Dec 2020
University of Guilan   [Slides]

Introduction to FISU and its structure   Sep 2019
University of Guilan   [Slides]

Final Project Representation   Sep 2019
International University Sports Federation (FISU)   [Video]

AI Learning Path   Jul 2019
Rasht School of AI   [Slides]

Introduction to Web Development   Apr 2018
University of Guilan

Basics of Programming   Oct 2017
University of Guilan   [Video]

LANGUAGES

Persian: Native   **English:** Fluent (IELTS 7.5)   **German:** Intermediate (Goethe Zertifikat)

REFERENCES

Dr. Seyed Abolghasem Mirroshandel   University of Guilan
mirroshandel@guilan.ac.ir   [Homepage]

· Associate Professor
· Head of the Computer Engineering Department
· Research And Development Manager at AVID Technology Development

Dr. Mohammad M. Ghassemi   Michigan State University
ghassem3@msu.edu   [Homepage]

· Assistant Professor
· National Scholar of Data and Technology Advancement, National Institutes of Health
· Founder, Ghamut Corporation
· Research Affiliate, Massachusetts Institute of Technology

Dr. Tuka Alhanai   New York University - Abu Dhabi
tuka.alhanai@nyu.edu   [Homepage]

· Assistant Professor
· co-Founder, Ghamut Corporation   · Research Affiliate, Massachusetts Institute of Technology

Dr. Mehdi Allahyari   Wells Fargo Financial Services Company
mehdi.allahyari@wellsfargo.com   [Homepage]

· Currently a Lead Data Scientist at Wells Fargo Financial Services Company and previously an Assistant Professor at Georgia Southern University