SEYED AMIR KASAEI

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EDUCATION

- **Bachelor of Science, Computer Engineering** (Sep 2019 – Aug 2023)
  University of Guilan
  GPA:3.98/4 (19.58/20) - **Ranked 1st**

HONORS & AWARDS

- **Ranked 1st** among B.Sc. Computer Engineering Students — Sep 2019 – Aug 2023
- Honored as **Exceptional Talented Student** (Certificate in Persian) — Aug 2023
- **Tuition Waiver**, Bachelor of Science, University of Guilan — Sep 2019 – Aug 2023

RESEARCH INTERESTS

Machine Learning, Deep Learning, Computer Vision, Image Processing, Medical Image Analysis, Image Classification, Image Segmentation, Machine Learning Safety

RESEARCH PAPERS

- **MAML on Human Sperm Abnormality Detection** (in progress)
  Seyed Amir Kasaei, Amir Mohammad Ezzati, Amin Mokaddar Daemdoost, Seyed Abolghasem Mirroshandel.

EXPERIENCES

- **Research Assistant**
  Sep 2022 - Aug 2023
  Univeristy of Guilan
  Supervisor: Dr. S A Mirroshandel
  Deep Learning

- **Teaching Assistant of Digital Circuits**
  Sep 2022 - Jan 2023
  Univeristy of Guilan
  Instructor: Dr. Mahhdi Aminian
  Designing and Grading Assignments and Projects, Problem Solving Classes

- **Teaching Assistant of Artificial Intelligence and Expert Systems**
  Sep 2022 - Jan 2023
  Univeristy of Guilan
  Instructor: Dr. Yasaman Boreshban
  Designing and Grading Assignments and Projects, Problem Solving Classes

- **Teaching Assistant of Microelectronic Circuits**
  Feb 2023 - Jun 2023
  Univeristy of Guilan
  Instructor: Dr. Mahhdi Aminian
  Designing and Grading Assignments and Projects, Problem Solving Classes

SELECTED ACCOMPLISHED PROJECTS - (Other Projects on Github)

- **CT-scan Image Segmentation using 3D-UNet** - Github repository
  - 3D-UNet model is implemented to segment liver in CT-scan images and compared to 2D-UNet
  - Scikit-learn, Torch, Numpy, Matplotlib, OpenCV
- **Breast Tumor Classification using GNN** - Github repository
  - GNN model is implemented to classify Breast Tumor on BRACS dataset
  - Histocartography, DGL, Torch Geometric, Torchvision, Scikit-learn, Torch, Numpy, Matplotlib, OpenCV, Pandas
- **Arabic Broken Plurals** - Github repository
  - We implemented a character based Machine Translation model to predict plural form of arabic words
  - BERT Embedding, Pandas, Scikit-learn, Keras, Tensorflow, Numpy
  - This project was done as a partnership with Dr. SA Mirroshandel for **Stony Brook University**
- **Multi-Class Weather Classification** - Github repository
  - Simple CNN, Resnet And Inception Net are all implemented an d compared for image classification
  - Pandas, Scikit-learn, Keras, Tensorflow, Numpy, Matplotlib

- **An Odd Music Generator** - Github repository
  - We implemented a Denoising Auto Encoder model to denoise the input song, a Deep Neural Network to recognize notes in the input song and a Language model to predict the next note of the song.
  - Scikit-learn, Keras, Tensorflow, Numpy, Librosa, Matplotlib
- **Multi-Lable Text Classification** - Github repository
  - We implemented a multi task language model to predict class type of subjects and also the sentimental analysis of sentences.
  - Pandas, Scikit-learn, Keras, Tensorflow, Numpy, Hazm, NLTK, Matplotlib

NOTABLE COURSES

- **Fundamental of Data Mining** - 20 / 20
- **Special Topics 1 (Deep Learning)** - 19.8 / 20
- **Special Topics 2 (Introduction to Machine Learning)** - 18.16 / 20
- **Fundamentals of Language and Speech Processing** - 20 / 20
- **Artificial Intelligence and Expert Systems** - 20 / 20
- **Principles of Database Design** - 20 / 20
- **Data Structures** - 20 / 20
- **Software Testing** - 20 / 20
- **Algorithm Design** - 20 / 20
- **Principles of Compiler Design** - 20 / 20
- **The Theory of Languages and Automata** - 19.75 / 20
- **Engineering Statistics and Probability** - 20 / 20
- **Signal and Systems** - 19.5 / 20
- **Engineering Mathematics** - 19.75 / 20
- **Differential Equations** - 18.75 / 20
- **Discrete Mathematics** - 19.75 / 20

LICENSES & CERTIFICATIONS

- **Deep Learning Specialization** - Credential
  DeepLearning.AI - Aug 2022
  Instructor: Andrew Ng
- **Funds. of Reinforcement Learning** - Credential
  University of Alberta - Aug 2022
  Instructor: Martha and Adam White
- **Crash Course on Python** -Credential
  Google - Aug 2022
- **Machine Learning Specialization** - Credential
  DeepLearning.AI - Sep 2022
  Instructor: Andrew Ng
- **IELTS** - Certificate
  IDP - Sep 2023
  Overall: 6.5
  Listening: 7, Reading: 6.5, Writing: 6, Speaking: 6

SKILLS

- **Programming Language :** Python, Java, C++, VHDL
- **Data Visualization :** Matplotlib, Panadas, Seaborn, OpenCV, Wandb
- **Machine Learning & Deep Learning :** Scikit-learn, Keras, Tensorflow, Pytorch, Learn2learn, Numpy
- **Computer Vision :** Image Classification, Image Segmentation, Image Processing
- **Natural Language Processing :** NLTK, Hazm, BERT, Language Models, Text Classification
- **Collaboration and Communication Tools :** Slack, GitHub, Skype, Discord
- **Web development :** HTML, CSS, Bootstrap, jQuery, PHP, MySQL

REFERENCES

Dr. Seyed Abolghasem Mirroshandel — *University of Guilan*
mirroshandel@guilan.ac.ir — *Google Scholar*
Associate Professor of Computer Engineering, University of Guilan, Rasht, Iran

Dr. Mahdi Aminian — *University of Guilan*
mahdi.aminian@guilan.ac.ir — *Google Scholar*
Assistant Professor of Computer Engineering, University of Guilan, Rasht, Iran

Dr. Yasaman Boreshban — *University of Guilan*
yasaman.boreshban@sharif.edu — *Google Scholar*
Lecturer, Sharif University of Technology, University of Guilan