

EMAD KEBRIAIEI

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PROFILE

I am a highly accomplished and versatile professional with over 6 years of experience spanning multiple domains within the technology landscape. My expertise encompasses AI leadership, software development, and natural language processing (NLP), reinforced by a strong educational foundation.

WORK EXPERIENCE

AI Technical Manager (Remote)

Mar 2022 – Present

KIDS' SHIELD SERVICES Inc.

Tehran, Iran

- Led a team in creating a multi-modal cyberbully detection system covering text, speech, images, and memes.
- Oversaw data acquisition, preprocessing, and model training, achieving top-tier detection accuracy.
- Collaborated with product managers for seamless system integration.
- Demonstrated leadership in overcoming technical challenges and fostering innovation.
- Maintained expertise in AI trends, cybersecurity, and ethical AI development.

Software Developer

Apr 2018 – Present

Faraz Ertebat Inc.

Tehran, Iran

- Built high-performance infrastructure using multithread programming, effectively handling thousands of connections to the database.
- Optimized database queries to significantly enhance software efficiency, resulting in improved application performance.
- Developed the Back-End of multiple web applications, ensuring their robustness and functionality.
- Created an embedded application on a Raspberry Pi, showcasing versatility in hardware and software integration.
- Engineered a real-time application for IP-based communication, demonstrating proficiency in VoIP technologies.
- Designed and implemented a map downloader program in Python, utilizing multithreaded techniques for efficient downloading.
- Utilized powerful Linux packages such as FFmpeg and Sox for audio transcoding, transforming, and IP-based streaming.
- Crafted intuitive database interfaces for various web-based software projects, enhancing user experience and data management.
- Proficient in network programming, establishing TCP/UDP connections, and optimizing data packetization to minimize latency.
- Automated processes through the development of custom Bash scripts, streamlining routine tasks and improving operational efficiency.
- Trained models for automatic license plate detection using YOLOv5, OpenCV and Faster-RCNN, showcasing expertise in computer vision and deep learning.
- Operated an Asterisk server and provided a browser-based softphone using WebRTC, highlighting proficiency in VoIP technologies and real-time communication systems.
- Relevant Technology & Libraries: C/C++, Python, MySQL, Flask, Qt, REST API, Swagger, Linux, Docker, PHP, CodeIgniter, Git, Wireshark

Golang Developer (Remote)

Feb 2022 – Feb 2023

TxtSoft Inc.

Tehran, Iran

- Developed a Back-End for an IoT system (Fennec), ensuring robust and scalable functionality for IoT device management.
- Provided LDAP services for the system, enhancing security and authentication capabilities.
- Relevant Technology & Libraries: Golang, Gorm, Gin, sql, gjson, url, swagger, Linux, Docker, Git

NLP Expert (Remote)

Sep 2021 – Jun 2022

Stockmark Inc.

Tehran, Iran

- Pretraining PEGASUS model for Japanese abstractive text summarization.
- Experiment on text generation evaluation metrics: ROUGE, BERTscore, BLUERT, MoverScore.
- Implementing WRD (word rotator distance) on STS (semantic textual similarity).
- Working on multilingual language models such as mBERT, mBART, LASER, MUSE, XLMR.
- Working on BERT solutions for phrase detection
- Comparing the information retrieval, machine learning, and deep learning approaches to extracting features
- Relevant Technology & Libraries: Python, PyTorch, BERT, LSTM, FastText, NLTK, Spacy, NumPy, SkLearn, Pandas, MeCab, Matplotlib, Linux, Docker, Git, Google Cloud

EDUCATION

PhD of Computer Software Engineering

University of Tehran

Jun 2022

Tehran, Iran

- Dissertation Title: Offensive Content Detection in Multilingual Environment using Graph Modeling
- Hateful and offensive messages are now gaining attention on social media, so this thesis is one of the first in this field that tries to model offensive content detection in multilingual space using graph solutions to gain knowledge transfer from high-resource languages to low-resource ones.
- Crawling Twitter, Feature Extraction, Data-set Balancing, Annotating Data, Creating Models, Analyzing
- results Relevant coursework: Information Retrieval, Data-Mining, Statistical Inference, Neural Networks and Deep Learning, Social Networks.
- ML Techniques & Specialized Libraries: Python, SVM, Logistic Regression, BERTweet, mBERT, BERT, XLM-RoBERTa, LSTM, FastText, NLTK, SkLearn, Pandas

MSc of Computer Science

University of Tehran

Sep 2017

Tehran, Iran

- Dissertation Title: Topic Extraction in Unstructured Text Using Parsimonious Topic Models
- One of the major challenges of topic models is the estimation of a large number of parameters for training the model, which derive from the high dimensional feature space of natural language. In this thesis, novel topic models have been presented under the name of parsimonious topic models with an optimization approach, which tries to solve this problem by reducing the number of parameters of the base model.
- Relevant coursework: Data-Mining, Machine Learning, Probabilistic Graphical Models
- ML Techniques & Specialized Libraries: Python, SVM, Logistic Regression, LDA, LSTM, FastText, NLTK, SkLearn, Pandas

BSc of Computer Software Engineering

Ferdowsi University of Mashhad

Sep 2014

Mashhad, Iran

- Dissertation Title: Designing Software Voters Using Fuzzy and Statistical Methods
- Relevant coursework: Fundamentals of Programming (C), Design of Algorithms, Data Structures, Object-Oriented Programming (C++), Artificial Intelligence, Database (SQL)

SKILLS

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|-----------------|---------|-----------|----------|
| – C++ | – NLP | – Qt | – Redis |
| – Python | – MySQL | – LLMs | – Docker |
| – Deep Learning | – Linux | – PyTorch | – Git |

LANGUAGES

Persian

Native

English

Highly Proficient