

ALI MIRAMIRKHANI

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Department of Computer Engineering
University of Isfahan,
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Isfahan, Isfahan Province, Iran

RESEARCH

❖ **Computer Vision**

INTEREST

❖ **Digital Image processing**

❖ **Machine Learning**

EDUCATION

BS **Isfahan University**, Computer Engineering
GPA: 3.67/4.0

Sep. 2020

RELATED COURSES

Artificial intelligence and expert systems (A+), Data Mining (A+), Semantic web (A+), Internet Engineering (A+), Object-oriented systems design (A+), Software Engineering (A), Systems analysis and design (A), Designing programming languages (A+)

RESEARCH AND EXPERIENCE

Bachelor's Thesis University of Isfahan, Isfahan, Iran
Advisor: Dr. Ahmad R. Naghsh-Nilchi

Sep. 2020

- Refining two-dimensional grayscale raw **angiographic X-ray images** (DICOM) dataset to provide an **open source** standard database
- Produce **noise-free**, labeled congestion grade, enhanced and **segmented** coronary arteries map database

Internship Payam Pardaz Co, Isfahan, Iran
Advisor: Mr. Hassani

Aug. 2018

- Developing automated **End-to-End (E2E) test** for a commercial angular web app
- Using **protractorJS** framework along with **Jasmine** testing framework in **JavaScript** language

INDEPENDENT STUDIES

Fundamentals of Digital Image and Video Processing
Coursera online image processing course
Offered by Northwestern University, Dr. Aggelos K. Katsaggelos

July 2020

Python 3 Image Processing Masterclass
Udemy online image processing course

Dec. 2019

NOTABLE COURSE PROJECTS

- ❖ Design and implement simple search, **Genetic Algorithm**, **Simulated Annealing** to solve Sudoku table using **C#**.
- ❖ Implement supervised text **classifier** to detect mobile spam text messages, deploy **Decision Tree** and **KNN** models, **Naive Bayes** using **N-Grams** feature generator, **TF-IDF** as feature weighting method and **F1-Score** for accuracy evaluation with **python** and **scikit-learn**

- ❖ Implement a query search system based on **Vector Space Model**, using **TF-IDF** weighting and **Cosine Similarity** concepts for ranking the related documents
- ❖ Design and implement **Boolean Information Retrieval Model** on corpus text documents for boolean and positional search queries using **python**
- ❖ Implement learning model to calculate product relationship using **FP-Growth** concept in **rapidminer**
- ❖ Implement supervised classification using **decision tree (id3, Cart)**, **rule model** and **KNN classifier** to detect intoxication in mushroom dataset
- ❖ Develop **Linux Shell** program to fully create/delete/check system users using **Bash Script**
- ❖ Design and implement **8-bit ALU** module using **Verilog HDL** and simulate in **Modelsim** to run specific instruction with a connected ROM
- ❖ Design and implement **16-bit CPU** module from scratch in **Logisim** software

HONORS & AWARDS

- ❖ Ranked **3rd** among students of Computer Engineering - software engineering group Sep. 2020
- ❖ Ranked within the **top 5%** of National University Entrance Exam Aug. 2015
- ❖ Ranked **1st** among 60 students for highschool diploma in mathematics and physics (GPA: 4.00) July 2014

LANGUAGES

English: Advanced (IELTS **7.5**, C1 CEFR, TOEFL iBT equivalent = 102-109)
IELTS Academic scores: Listening 8, Reading 7.5, Writing 6, Speaking 7.5

Persian: Native Language

SKILLS

Programming and Data-Base Languages: Python, C#, C/C++, Java, Web (HTML, CSS, JS), Bash-Script, Prolog, MS-SQL, MySQL, SQLite

Software and Frameworks: Scikit-Learn, OpenCv, RapidMiner, PyDicom

Software development: Git, ProtractorJS, MS Visio, Scrum

Hardware Tools and Languages: Logisim, MIPS Assembly, Modelsim, Verilog

Typesetting: LaTeX, MS-Word

Operating Systems: Linux (Ubuntu, Red Hat), Windows