



# Ali Varasteh Ranjbar

✉ Email: ☎ Phone:

📞 WhatsApp Messenger: [in](#) LinkedIn: Date of birth: 21/01/1998

## EDUCATION AND TRAINING

[ 02/11/2023 – Current ]

### Ph.D. in Computer Science

**University of Genova** <https://dibris.unige.it/>

**City:** Genova

**Country:** Italy

**Field(s) of study:** Computer Science

**Thesis:** Application of artificial intelligence in manufacturing

- Conducting pioneering research on the application of artificial intelligence in manufacturing, focusing on quality control, and predictive maintenance in aeronautics and automotive, and recognition of electronic components.
- Developing novel AI methodologies to address specific challenges in each domain.
- Collaborating with industry partners to validate proposed solutions and ensure real-world applicability.

[ 19/09/2021 – 17/10/2023 ]

### MSc in Engineering Technology for Strategy and Security

**University of Genova** <http://www.simulationteam.com/strategos/index.html>

**City:** Genova

**Country:** Italy

**Final grade:** 110 e lode

Activities and societies:

- 1) Python Programming
- 2) Strategy Decision-Making
- 3) Data Analytics
- 4) Writing Content
- 5) Statistics Analysing

[ 20/07/2021 – 11/07/2023 ]

### English test 120/160

**Duolingo** <certs.duolingo.com/7yx74g7b>

[ 30/11/2021 – 31/12/2021 ]

### Python Data Structures

**University of Michigan | Coursera** <coursera.org/verify/NWWCTJZ25QKY>

- Python Syntax And Semantics
- Data Structure
- Tuple
- Python Programming

[ 16/01/2022 ]

### Deep Learning Specialization

**Coursera | DeepLearning.AI**

- Artificial Neural Network
- Convolutional Neural Network
- Tensorflow

- Recurrent Neural Network
- Transformers
- Backpropagation
- Deep Learning
- Python Programming
- Neural Network Architecture
- Mathematical Optimization
- hyperparameter tuning
- Inductive Transfer

[ 31/12/2021 – 17/01/2022 ]

### Ask Questions to Make Data-Driven Decisions

**Coursera | Google** <https://www.coursera.org/>

- Big Data
- Data Management
- Data Analysis
- Cloud Computing
- Distributed Computing Architecture
- Data Analysis Software
- Data Visualization

[ 16/10/2019 – 06/11/2019 ]

### Certification of Attendance (Matlab Software)

<http://www.en.sharif.edu/>

**Address:** Sharif University of Technology Azadi Ave Tehran, Iran, 11365-11155, tehran, Iran

[ 09/12/2021 ]

### Applied Data Science with Python Specialization

**University of Michigan | Coursera** <https://www.coursera.org/>

## WORK EXPERIENCE

[ 01/07/2022 ]

### Researcher

#### *Manipulation and Environmental Robotics (MER) Lab*

**City:** worcester

**Country:** United States

Researching analytical computer vision algorithms, ensemble learning, and generative models to find out optimal grasp detection model for robots.

**Skills:** Generative Adversarial Networks (GANs) · Ensemble learning · Convolutional Neural Networks (CNN) · RCNN · Image Processing · Python · Computer Vision · Deep Learning · Big Data

[ 01/07/2023 ]

### Postgraduate Researcher

#### *Università degli Studi di Genova*

**City:** Genova

**Country:** Italy

- Applications of Computational Intelligence in Shipbuilding

[ 01/09/2022 – 30/06/2023 ]

### Data Scientist Researcher

#### *Vega Research Laboratories*

**City:** Genova

**Country:** Italy

- Companies involved: FOS, Vega Research Lab, Cetena (all working for Fincantieri)
- Project description: The project aimed to bring artificial intelligence (AI) to naval manufacturing by implementing image processing techniques for the detection of

deformation in steel plates. The goal was to develop algorithms that could accurately identify and measure deformations in the plates, improving the overall quality control process in shipbuilding.

- Duties within the project: As a member of the project team, my responsibilities included:
  - Researching and studying existing image processing algorithms suitable for deformation detection in steel plates.
  - Collaborating with the team to develop and implement new algorithms tailored to the specific requirements of the project.
  - Conducting tests and experiments to evaluate the performance and accuracy of the implemented algorithms.
  - Analyzing the results and providing feedback for further improvements.
- Results achieved:
  - Successfully implemented various image processing algorithms specifically designed for deformation detection in steel plates.
  - Achieved a high level of precision in detecting movement deformations, with an accuracy of up to 1 millimeter.
  - Contributed to enhancing the quality control process in naval manufacturing by providing a reliable and efficient AI-based solution for deformation detection.

[ 03/08/2020 – 09/10/2020 ]

### **Research and development associate**

#### ***Petronic Adrapana***

**City:** Tehran

**Country:** Iran

During my tenure as a Research and Development Associate in the Drilling Studies Department, punctuality and meeting deadlines were paramount in our workflow. I consistently demonstrated a strong work ethic, striving to enhance my expertise and expand my understanding of our field by actively engaging with up-to-date research articles. As a cohesive team, I actively contributed and aimed to be an impactful member.

[ 09/02/2018 – 09/10/2019 ]

### **Editorial director**

**SIMAG** <http://www.simag.ir/>

**City:** Tehran

**Country:** Iran

I worked at SIMAG Journal, a scientific research journal, where I held the role of Editorial Director. As the Editorial Director, my responsibilities encompassed overseeing the publication process and ensuring the high quality of scientific articles. I was entrusted with managing the editorial team, coordinating peer review processes, and maintaining the journal's standards of excellence. My role also involved engaging with researchers and scholars to foster collaboration and promote the dissemination of impactful scientific discoveries.

[ 03/07/2017 – 07/12/2017 ]

### **Research and development associate**

#### ***Iranian Central Oil Fields Company***

**City:** Tehran

**Country:** Iran

During my tenure as a Research and Development Associate in the Drilling Studies Department, punctuality and meeting deadlines were paramount in our workflow. I consistently demonstrated a strong work ethic, striving to enhance my expertise and expand my understanding of our field by actively engaging with up-to-date research articles. As a cohesive team, I actively contributed and aimed to be an impactful member.

## PROJECTS

---

[ 01/09/2022 – 30/06/2023 ] **Scafo4.0**

- Companies involved: FOS, Vega Research Lab, Cetena (all working for Fincantieri)
- Project description: The project aimed to bring artificial intelligence (AI) to naval manufacturing by implementing image processing techniques for the detection of deformation in steel plates. The goal was to develop algorithms that could accurately identify and measure deformations in the plates, improving the overall quality control process in shipbuilding.
- Duties within the project: As a member of the project team, my responsibilities included:
  - Researching and studying existing image processing algorithms suitable for deformation detection in steel plates.
  - Collaborating with the team to develop and implement new algorithms tailored to the specific requirements of the project.
  - Conducting tests and experiments to evaluate the performance and accuracy of the implemented algorithms.
  - Analyzing the results and providing feedback for further improvements.
- Results achieved:
  - Successfully implemented various image processing algorithms specifically designed for deformation detection in steel plates.
  - Achieved a high level of precision in detecting movement deformations, with an accuracy of up to 1 millimeter.
  - Contributed to enhancing the quality control process in naval manufacturing by providing a reliable and efficient AI-based solution for deformation detection.

### Text mining from Twitter

The text mining project focused on extracting valuable insights and patterns from Twitter data. The objective was to harness the power of natural language processing (NLP) techniques to analyze and understand the vast amount of textual information shared on the social media platform. By employing advanced algorithms and machine learning models, the project aimed to extract meaningful information, sentiment analysis, and trend identification from Twitter data.

### Data Visualisation on NISPUF17

### Movie Recommendations on Netflix

## DIGITAL SKILLS

---

Programmin language PYTHON | Research Methodologies | R&D | Team-work oriented | Decision-making | Python OOP | data visualization | GIT & Github | SQL (MySQL) | Big data analysis | Tensor Flow | Regex | NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, NLTK, NetworkX, SciPy, TensorFlow | Natural Language Processing (NLP) | machine learning | Deep Learning | Computer Vision | Image Processing, Image Analysis, Image Segmentation | AI | Javascript(Nodejs, ExpressJs) | Programming Languages - C,C++,Java,HTML and MS SQL server

## LANGUAGE SKILLS

---

**Mother tongue(s):** Persian

**Other language(s):**

### English

**LISTENING C1 READING B2 WRITING B2**

**SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1**

### Italian

**LISTENING A1 READING A1 WRITING A1**

**SPOKEN PRODUCTION A1 SPOKEN INTERACTION A1**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*