

# Maede Maftouni

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## EDUCATION

Ph.D. in Industrial and Systems Engineering <i>Virginia Tech, Blacksburg, VA, USA</i> GPA: 4/4	Aug 2017 – May 2022
M.Sc. in Industrial and Systems Engineering <i>Virginia Tech, Blacksburg, VA, USA</i> GPA: 3.97/4	Aug 2017 – May 2020
M.Sc. in Industrial and Management Systems Engineering <i>Amirkabir University of Technology (AUT), Tehran, Iran</i> GPA: 3.91/4	Sep 2013 – May 2015
B.Sc. in Industrial and Management Systems Engineering <i>Amirkabir University of Technology (AUT), Tehran, Iran</i> GPA: 3.82/4	Sep 2009 – May 2013

## SKILLS

- Solid knowledge in Data Analytics, Machine Learning, Computer Vision, and Operations Research
- Experience in programming languages: Python (Pandas, PyTorch, TensorFlow), SQL, R, and MATLAB.
- Experience in technical software: SPSS, VENSIM, OpenCV, ARENA, and Primavera P6.
- Proficiency in Microsoft Excel and VBA programming.

## SELECTED WORK EXPERIENCE

<b>Graduate Research Assistant, Virginia Tech</b> • Designed and implemented a robust COVID-19 CT scan classifier, Oct 2020 • Designed and implemented a deep learning structure for laser melt pool video object segmentation, May 2020. • Developed an online machine learning based control of smartphone battery recycling process, Nov 2019. • Designed and implemented an anomaly detection method for multivariate time series sensor data, Dec 2018.	Sep. 2018 – Present
<b>Instructor, Virginia Tech</b> • Teaching Engineering Economy Undergraduate Course.	Summer 2019
<b>Graduate Research Assistant, AUT</b> • Designed and implemented a type-2 fuzzy expert system for osteomyelitis diagnosis.	Sep. 2014 – May. 2015

## PUBLICATIONS

- **Maede Maftouni**, M.H. Fazel Zarandi, I.B. Turksen, N. Ayubi Yazdi, “Systematic Bone Infection Detection in Axial Diabetic Foot MRI,” in IEEE CIBCB 2015.
- **Maede Maftouni**, M.H. Fazel Zarandi, I.B. Turksen, Faeze Roshani, “Type-2 Fuzzy Rule-Based Expert System for Ankylosing Spondylitis Diagnosis,” NAFIPS 2015.
- Faeze Roshani, M.H. Fazel Zarandi, I.B. Turksen, **Maede Maftouni**, “Fuzzy Expert System for Prognosis of Breast Cancer Recurrence,” NAFIPS 2015.

## AWARDS AND ACHIEVEMENTS

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|--------------------------------------------------------------------------------------------------------------------------|-----------|
| • Selected as the INFORMS QSR <b>Data Challenge finalist</b> on “CT Scan Diagnosis for COVID-19”.                        | Oct 2020  |
| • Awarded the <b>Graduate Fellowship</b> for the Ph.D. program at Virginia Tech.                                         | Apr 2017  |
| • Membership of “National <b>Exceptional Talented Students</b> ” community at AUT.                                       | May 2013  |
| • Offered <b>honorary admission to MSc. in Industrial Engineering</b> at AUT.                                            | June 2013 |
| • Top student award based on academic performance and cultural points for three successive semesters.                    | 2011-2012 |
| • Ranked 864 <sup>th</sup> ( <b>top 0.3%</b> ) in nation-wide University Entrance Exam in Mathematics and Physics major. | July 2009 |

## PROFESSIONAL TRAINING AND CERTIFICATES

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|--------------------------------------------------------------------------------------------------|----------|
| • Graduate <b>Certificate in Data Analytics</b> at Virginia Tech.                                | May 2020 |
| • One-year higher education course entitled “ <b>Project Engineering</b> ” at Tose’eh Institute. | Apr 2016 |
| • Using Python to Access Web Data - University of Michigan at Coursera.org.                      | May 2016 |
| • Machine Learning - Stanford University at Coursera.org.                                        | Dec 2015 |

## LEADERSHIP AND ACTIVITIES

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|--------------------------------------------------------------------|---------------------|
| • Serving as INFORMS student chapter vice president at VT.         | Aug 2020 - May 2021 |
| • Serving as the ISE scientific association vice president at AUT. | Aug 2010 - May 2011 |