

Curriculum vitae

Full name: **Reza Jahromi**

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Education

- ✓ **Ph.D. student in Industrial and Systems Engineering**
Texas A&M University, College Station, TX, USA (2019-present)
Current GPA: 4/4
 - **Selected graduate course:**
 - Deep Learning: A

- ✓ **M.Sc. in Mechanical Engineering**
Sharif University of Technology, Tehran, Iran (2013-2016)
Thesis: Simulation of blood flow in a stenotic left coronary bifurcation to predict the location of the secondary stenosis
Thesis score: 19.7/20
GPA: 3.60/4, (17.03/20)
 - **Selected graduate course:**
 - Advanced Mathematics: A+

- ✓ **B.Sc. in Mechanical Engineering**
University of Tehran, Tehran, Iran (2009-2013)
GPA: 3.43/4, (16.49/20)
 - **Undergraduate courses:**

- Differential Equations: A+	- Numerical Computation: A+
- Computer Programming: A+	- Engineering Mathematics: A+
- Mathematics I and II: A+	- Physics I and II: A+

Licenses

- ✓ **Offered via Coursera:**
 - **Machine Learning** (Stanford University): 27MLNZENF6W7
 - **Deep Learning:** YKR9ZK52HY5P

- **Neural Networks and Deep Learning:** P9WCQAEEYVWX
- **Structuring Machine Learning Projects:** QB4H3MHZH277
- **Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization:** QP5M6EN59RHP
- **Convolutional Neural Networks:** EEPMNWDKL5AW
- **Sequence Models:** ZVKE38PZYR83
- **Mathematics for Machine Learning: Linear Algebra** (Imperial college London): 3NKH7REEPY2Q

Research Experiences

- ✓ Project: “Implementing **regularized linear regression** and **logistic regression algorithms** from scratch to predict the outcome of interest in Pokeman GO!” (using **python** – 2020)
- ✓ Project: “Video-based **human behavior detection** using hybrid (**CNN Transfer learning** and **LSTM**) **neural networks** with **Keras** and **openCV**” (using **Python** – 2020)
- ✓ Project: “**Machine learning** in the early prediction of infectious diseases using **sensor-based** physiological **signals** of the body: **Heart Rate, PPG, RR,** and temperature signal” (using **Python** – 2020)
- ✓ Project: “Continuous-time **recurrent neural network** for **human behaviour and activity recognition**” (using **Python** – 2019)
- ✓ Project: “A **convolutional neural network** for understanding the tightness level of smartwatch to capture high-quality physiological **signals**” (using **Python** – 2019)
- ✓ Project: “**Random forest** versus **support vector machine (SVM)** algorithms for **human behavior and activity detection** based on **sensors data**” (using **Python** – 2019)
- ✓ Project: “An **algorithm** for real-time understanding of photoplethysmogram (**PPG**) quality based on the power spectral density of **PPG signal**” (using **Python** – 2018)
- ✓ Project: “**Computer simulation** of the blood in a stenotic left coronary bifurcation to **predict** the location of secondary stenosis” (using **C++** - 2016)
- ✓ Project: “Development of a novel FVM code for laminar flow in a two-dimensional duct using the **SIMPLER algorithm**” (using **C++** - 2015)

Research Interests

- ✓ Artificial Intelligence – Machine Learning – Deep Learning
- ✓ Signal Processing – Image Processing
- ✓ Mathematics
- ✓ Human Activity Recognition
- ✓ Data Analytics
- ✓ Human Computer Interaction
- ✓ Numerical Modeling – Computer Simulation
- ✓ Cardiovascular System

Software Capabilities

- ✓ **Programming languages:** Python, C++, MATLAB, SQL
- ✓ **Engineering Software:** ANSYS (Fluent, Structural), SolidWorks, Tecplot, AutoCAD.
- ✓ **Operating systems:** Microsoft Windows, Linux

Publications

- ✓ **Jahromi R**, Mogharab V, Jahromi H, Avazpour A. “Synergistic effects of anionic surfactants on coronavirus (SARS-CoV-2) virucidal efficiency of sanitizing fluids to fight COVID-19”. Food and Chemical Toxicology. 2020: 111702.
<https://doi.org/10.1016/j.fct.2020.111702>
- ✓ **Jahromi R**, Pakravan H A, Saidi M S, Firoozabadi B. “Primary stenosis progression versus secondary stenosis formation in the left coronary bifurcation: a mechanical point of view”. Biocybernetics and Biomedical Engineering. 2019.
<https://doi.org/10.1016/j.bbe.2018.11.006>

Conference presentations

- ✓ **R. Jahromi**, M. S. Saidi, B. Firoozabadi. “Computer simulation of an atherosclerotic left coronary bifurcation to study the effects on the endothelial cells”. Oral presentation. NABICAD, 2nd conference on novel approaches of biomedical engineering in cardiovascular diseases. Tehran, Iran, January 21, **2016**.

Teaching Experiences

- ✓ **Sharif University of Technology, Teaching Assistantship**
Partial Differential Equations, Instructor: Dr. M. Hesaaraki, Spring 2014.

Honors and Awards

- ✓ Ranked 18 between 23608 competitors in graduate National Universities Entrance Exam (2013).
- ✓ Full Scholarship to study the undergraduate program, University of Tehran
- ✓ Ranked 142 between 273668 competitors in undergraduate National Universities Entrance Exam (2009).

English tests scores:

- ✓ **TOEFL iBT**(August 2018): **98**
Reading (23/30), Listening (23/30), Speaking (26/30), Writing (26/30)
- ✓ **GRE General Test** (October 2018): **316**
Verbal Reasoning (147/170), Quantitative Reasoning (169/170), Writing (4/6)