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| **Matin Kheirkhahan**  [cise.ufl.edu/~matin](https://cise.ufl.edu/~matin) | Cell:  Email:  Github: | (352) 871-5359  matin.kh@gmail.com  matin-ufl |

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| **Summary**   * Passionate about Artificial Intelligence and Machine Learning research and applications. * Excellent software engineering skills. |

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| **Education** |  |
| **Ph.D. in Computer Science** (3.89/4)  University of Florida, Gainesville FL, USA | *August 2018* |
| **M.S. in Computer Engineering**  University of Florida, Gainesville FL, USA | *May 2018* |
| **M.S. in Artificial Intelligence and Robotics**  Iran University of Science and Engineering, Tehran, Iran | *May 2012* |
| **B.S. in Computer Engineering**  University of Tehran | *September 2009* |

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| **Key Skills**   * **Software Development:** extensive professional experience in academia and industry.   + Deep understanding of data structures, algorithm designs and analysis.   + Developed several major projects, such as web servers, smartwatch applications and analytical programs.   + Proficient in all major object-oriented programming languages.   + Frequently contributed to open source projects. (stackoverflow reputation: 3K)   + Experience with version control systems, such as Git and SVN. * **Machine Learning:** researched and developed machine learning methods as the main focus of PhD works and internship.   + Professional experience in unsupervised (clustering), supervised (classification) and semi-supervised learning methods.   + Experience with Deep Learning methods, such as CNN, RNN and one-shot learning. * **Data Science:** five years of research experience in a multi-disciplinary data science group.   + Professional experience with all steps of data science: data collection, cleaning, exploration, analysis and result interpretation.   + Used regression, time series analysis and pattern recognition extensively for extracting information from raw data.   + Experienced with Big Data frameworks (Map Reduce), such as Apache Spark.   + Developed analytical frameworks for predictive analysis and real-time data visualization.   + Mastered inter-disciplinary communication skills to explain the findings to technical and non-technical audience. * **Leadership:** Led groups of 4 and 5 students and successfully delivered a real-time framework for mobility monitoring and physical activity assessment. |

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| **Programming Skills**   * **Programming Languages:** C, C++, Java, Python, R, Javascript, Tizen, Bash Script, Matlab, SQL * **Databases:** MySQL, PostgreSQL, Oracle, MS SQL Server * **Other:** Git, LATEX, Django, Redhat (Linux) |

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| **Professional Experience** |  |
| **Software Engineer,** Google  Mountain View CA   * Working on Google Home project (Google Hardware). | *11/2018 – present* |
| **Machine Learning Research Intern,** Philips Research North America, Cambridge MA   * Developed an automated patient-ventilator asynchrony detection framework. * Designed a centralized database model for analysis of ventilator waveform big data. * Researched and developed an active-learning system for generating annotated data in parallel with improving the accuracy of asynchrony detection. | *08/2017 – 12/2017* |
| **Research Assistant,** University of Florida,  Gainesville FL   * Introduced machine learning methods for physical activity assessment using wearable sensors. * Applied signal processing and time-series analysis for feature derivation from accelerometer data and improved activity recognition accuracy by 10%. * Designed and implemented a novel transfer learning method to leverage the existing knowledge from different wearables to enhance the performance of smartwatch-based mobility monitoring model. | *08/2013 – 11/2018* |
| **Software Engineer,** Datxsoft  Tehran, Iran   * Designed and implemented user management, security and customer call center for a stock exchange system. | *05/2012 – 08/2013* |

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| **Teaching Experience** |  |
| * TA of **Database Management Systems** at UF | *Spring 2018* |
| * TA of **Analysis of Algorithms** at UF | *Spring & Fall 2016, Spring 2017* |
| * TA of **Introduction to Data Mining** at UF | *Fall 2015* |
| * Instructor of **C++ Programming** at Allame Helli High School | *2012 – 2013* |
| * TA of **Stochastic Pattern Recognition** at IUST | *Fall 2011* |
| * TA of **Introduction to Artificial Intelligence** at UT | *Spring 2008, Spring & Fall 2009* |
| * TA of **Fundamentals of Computer Programming** at UT | *Fall 2007* |

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| **Honors and Involvements**   * Received full assistantship for Ph.D. program in Computer Science from UF. (2013 – 2018) * President of Iranian Student Association (ISA) at UF. (2015 – 2016) * Ranked top 0.001% in nationwide matriculation exam – 215th among 500,000. (2005) |

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| **Publications**  [1] Real-Time Online Assessment and Monitoring of Mobility. *Journal of Biomedical Informatics, 2018* (accepted)  [2] Wrist Accelerometer Shape Feature Derivation Methods for Assessing Activities of Daily Living. *Journal of BMC Medical Informatics and Decision Making, 2018* (accepted)  [3] A Bag-of-Words Approach for Identifying Aspects of Activities of Daily Living using Wrist Accelerometer Data. *IEEE-BIBM'17*  [4] Power-Efficient Real-Time Approach to Non-Wear Time Detection for Smartwatches. *IEEE-BHI'17*  [5] Adaptive Walk Detection Algorithm using Activity Counts. *IEEE-BHI'17*  [6] Identifying Physical Activity Type using Wrist Models Constructed for High-Frequency Accelerometer Data. *ACSM’17*  [7] Effect of Activity-related Pain on Gait Characteristics During 4-meter Usual-pace Walking Across The Lifespan. *ACSM’17*  [8] Actigraphy Features for Predicting Mobility Disability in Older Adults. *Journal of Physiological Measurement, 2016*  [9] ROAMM: A Software Infrastructure for Real-time Monitoring of Personal Health. *IEEEHealthcom’16*  [10] Use of Hip-Worn Accelerometry to Predict Walking Speed in Older Adults: A Methodological Study. (*submitted to)* Journal of Physiological Measurement 2018. |

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| **Reviewer**   * Journal of Biomedical Health and Informatics (Spring 2017 – present) * Journal of Knowledge and Information Systems (Fall 2015 – present) * Transactions on Mobile Computing (Fall 2017 – present) * Journal of Sensors (Fall 2016) * Journal of Pervasive Mobile Computing (PMC) (Fall 2013) |

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|  | University of Florida | |  |
|  | Relevant Graduate Courses | |  |
|  | Course | Grade |  |
|  | Advanced Data Structures | A |  |
|  | Analysis of Algorithms | A |  |
|  | Database Management Systems | A |  |
|  | Distributed Operating Systems | A |  |
|  | Analysis of Multivariate Data | A |  |
|  | Numerical Optimization | A |  |
|  | Machine Learning | A- |  |
|  | Advanced Machine Learning | A- |  |
|  | Deep Learning | deeplearning.ai |  |