Fateme Nateghi Haredasht

Curriculum Vitae

Experience

Sep 2023 –
Present
Postdoctoral researcher
○ **Stanford Center for Biomedical Informatics Research (BMIR)**
○ **Supervisor: Dr. Jonathan H. Chen, MD, PhD**
School of Medicine, Stanford University, *USA*

Jan 2023 –
July 2023
Postdoctoral researcher
○ **Public health and primary care**
○ **Supervisor: Prof. dr. Celine Vens, PhD**
School of Medicine, KU Leuven, *Belgium*

Education

2019 – 2023
PhD in Biomedical Sciences
○ **Thematic program: Health & Technology**
School of Medicine, KU Leuven, *Belgium*

2014 – 2017
M.Sc. Biomedical Engineering (Bioinformatics), *Department of Biomedical Engineering, Amirkabir University of Technology (Tehran Polytechnic)*, Tehran, *Iran*
GPA: **19.15/20** (1st Rank)

2007 – 2011
B.Sc. Electrical Engineering, *Electrical Engineering Department, University of Guilan*, Rasht, *Iran*
GPA: **16.41/20** (3rd Rank)

PhD Thesis

Title **_Development of predictive models for critically ill patients with acute kidney injury_**

Supervisor Prof. dr. Celine Vens

Co-supervisor Prof. dr. Hans Pottel

Co-supervisor dr. Wouter De Corte

Co-supervisor dr. Liesbeth Viaene

Research Interests

AI for Healthcare

Medical Informatics

Explainable AI

Survival Analysis

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Grants and Fellowships

2024 **Stanford Bio-X Interdisciplinary Initiatives Program Seed Grant**, *Enhancing Specialty Care with Digital Medical Consultations: A Retrieval-Augmented Language Model Approach*, **Role: Lead Postdoctoral Researcher and Grant Lead (Author and Contributor of Original Proposal)**, Official PI: Dr. Jonathan H. Chen, **Role: Lead Postdoctoral Researcher and Primary Author**, Co-PIs: Dr. Michael Bernstein, Dr. Robert Tibshirani, Dr. Mary Kane Goldstein, Institution: Stanford University, Bio-X 2024 Grant Info

Contributions to Reports and Policy Documents

2025 **Stanford Institute for Human-Centered Artificial Intelligence (HAI), AI Index 2025 Report**, Contributor to **Chapter 5: Science and Medicine**, Link to Report

Publications

Journal CT Chang, H Farah, H Gui, SJ Rezaei, C Bou-Khalil, YJ Park, **F Nateghi Haredasht**, et al., **"Red teaming ChatGPT in medicine to yield real-world insights on model behavior,"** *npj Digital Medicine* 8 (1), 149, 2025.

Journal I Lopez, A Swaminathan, K Vedula, S Narayanan, **F Nateghi Haredasht**, **"Clinical entity augmented retrieval for clinical information extraction,"** *npj Digital Medicine* 8 (1), 45, 2025.

Journal **Fateme Nateghi Haredasht**, Sajjad Fouladvand, Steven Tate, Min Min Chan, Joannas Jie Lin Yeow, Kira Griffiths, Ivan Lopez, Jeremiah W. Bertz, Adam S. Miner, Tina Hernandez-Boussard, Chwen-Yuen Angie Chen, Huiqiong Deng, Keith Humphreys, Anna Lembke, L. Alexander Vance, Jonathan H. Chen, **"Predictability of Buprenorphine-Naloxone Treatment Retention: A Multi-Site Analysis Combining Electronic Health Records and Machine Learning,"** Addiction: 2024.

Journal **Fateme Nateghi Haredasht**, Michela Venturini, František Sabovčik, Robert J.H. Miller, Tatiana Kuznetsova, Celine Vens, **"Improving 1-year Mortality Prediction After Pediatric Heart Transplantation Using Hypothetical Donor-recipient Matches,"** IEEE Access: 2024.

Journal **Fateme Nateghi Haredasht**, Liesbeth Viaene, Wouter De Corte, Hans Pottel, Celine Vens, **"Predicting outcomes of acute kidney injury in critically ill patients using machine learning,"** Scientific Reports 2023.

Journal **Fateme Nateghi Haredasht**, Kazeem Adesina Dauda, and Celine Vens, **"Exploiting Censored Information in Self-Training for Time-to-Event Prediction,"** IEEE Access: 2023.

Journal **Fateme Nateghi Haredasht**, Laban Vanhoutte, Celine Vens, Hans Pottel, Liesbeth Viaene, Wouter De Corte, **"Validated prediction models for outcomes of acute kidney injury: systematic review,"** BMC nephrology 24, no. 1 (2023): 1-15.

Journal **Fateme Nateghi Haredasht**, Celine Vens, **"Predicting Survival Outcomes in the Presence of Unlabeled Data,"** *Machine Learning* 2022, pp.1-19

Journal **Fateme Nateghi Haredasht**, Maria Antonatous, Etienne Cavalier, Pierre Delanaye, Hans Pottel, Konstantinos Makris, **"The effect of different consensus definitions on diagnosing Acute Kidney Injury-events and their association with in-hospital mortality,"** Journal of Nephrology (2022), pp.1-9.

Journal **Fateme Nateghi Haredasht**, Liesbeth Viaene, Celine Vens, Nico Callewaert, Wouter De Corte, Hans Pottel, **"Comparison between cystatin C- and creatinine-based estimated glomerular filtration rate in the follow-up of patients recovering from a stage 3 AKI in ICU,"** Journal of Clinical Medicine 11, no. 24 (2022): 7264.

Journal Pooya Ashtari, **Fateme Nateghi Haredasht**, Hamid Beigy, **"Supervised fuzzy partitioning,"** Pattern Recognition, vol. 97, p. 107013, 2020.

Preprint P Ashtari, S Noei, **Fateme Nateghi Haredasht**, JH Chen, G Jurman, A Pizurica, et al., **"Deconver: A Deconvolutional Network for Medical Image Segmentation,"** arXiv preprint arXiv:2504.00302, 2025.

Preprint I Lopez, **Fateme Nateghi Haredasht**, K Caoili, JH Chen, A Chaudhari, **"Embedding-Driven Diversity Sampling to Improve Few-Shot Synthetic Data Generation,"** arXiv preprint arXiv:2501.11199, 2025.

Preprint **Fateme Nateghi Haredasht**, F Amrollahi, M Maddali, N Marshall, S Ma, **"Antibiotic Resistance Microbiology Dataset (ARMD): A De-identified Resource for Studying Antimicrobial Resistance Using Electronic Health Records,"** arXiv preprint arXiv:2503.07664, 2025.

Preprint P Ashtari, P Behmandpoor, **Fateme Nateghi Haredasht**, JH Chen, P Patrinos, **"Quantization-free Lossy Image Compression Using Integer Matrix Factorization,"** arXiv preprint arXiv:2408.12691, 2024.

Conference **Fateme Nateghi Haredasht**, D Kim, JD Romano, G Tison, R Daneshjou, JH Chen, **"Session Introduction: AI and Machine Learning in Clinical Medicine: Generative and Interactive Systems at the Human-Machine Interface,"** *Pacific Symposium on Biocomputing*, 2025.

Conference **Fateme Nateghi Haredasht**, Sajjad Fouladvand, Steven Tate, Min Min Chan, Joannas Jie Lin Yeow, Kira Griffiths, Ivan Lopez, Jeremiah W. Bertz, Adam S. Miner, Tina Hernandez-Boussard, Chwen-Yuen Angie Chen, Huiqiong Deng, Keith Humphreys, Anna Lembke, L. Alexander Vance, Jonathan H. Chen, **"Predicting Treatment Attrition in Buprenorphine-Naloxone Therapy: A Machine Learning Approach Using Multi-Site EHR Data"**, *AMIA 2024 Annual Symposium, San Francisco. (Podium Abstract)*

Conference **Fateme Nateghi Haredasht**, Manoj V. Maddali, Stephen P. Ma, Amy Chang, Grace Y.E. Kim, Niaz Banaei, Stanley Deresinski, Mary K. Goldstein, Steven M. Asch, Jonathan H. Chen, **"Enhancing Antibiotic Stewardship: A Machine Learning Approach to Predicting Antibiotic Resistance in Inpatient Care"**, *AMIA 2024 Annual Symposium, San Francisco. (Full Paper)*

Conference Felipe Kenji Nakano, Antoine Lanot, Anna Akesson, Hans Pottel, Pierre Delanaye, Ulf Nyman, Jonas Bjork, Klest Dedja, Robbe D'hondt, **Fateme Nateghi Haredasht**, Jasper de Boer, Celine Vens, **"Estimation of GFR with Machine Learning Models Compared to EKFC Equation,"** 2023. 2ème Conférence Intelligence Artificielle Néphrologie, Paris.

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Conference	**Fateme Nateghi Haredasht**, Konstantinos Makris, Pierre Delanaye, Hans Pottel, **"Association of AKI-event defined by Different Definitions with In-hospital Mortality"**, 2021.ERA-EDTA.
Conference	**Fateme Nateghi Haredasht**, Liesbeth Viaene, Wouter De Corte, Celine Vens,**"Exploiting unlabeled data to predict the development of CKD after AKI in critically ill patients"**, 2021. Intelligence Artificielle & Néphrologie.
Symposium	**Fateme Nateghi Haredasht**, Celine Vens,**"Predicting Survival Outcomes in the Presence of Unlabeled Data"**, 2019. Annual IEEE EMBS Benelux Chapter Symposium.
Conference	**Fateme Nateghi Haredasht**, Mohammad H. Moradi,**"Nonlinear Causality Inference in Microarray Time Series"**, 2019. Published in BNAIC/BENELEARN.
Conference	**Fateme Nateghi Haredasht**, Farnaz Ghassemi, Mohammad H. Moradi,**"Causal inference of gene expression data using a clustering-based extension of kernel-Granger causality"**, 2016. Published in the Iranian Conference of Biomedical Engineering (ICBME). (indexed by IEEE).

Supervisory Experience

2019	**Time to event analysis for regularized high-dimensional survival analysis models**, *Daily supervisor of Mateusz Blommaert for Master of Science in Engineering*, KU Leuven.
2020	**Student researcher**, *Daily supervisor of Laban Vanhouttes*, Medical student, KU Leuven-Kulak.
2021	**Student researcher**, *Daily supervisor of Fauve Goethals*, Medical student, KU Leuven-Kulak.
2022	**The quest for early markers for Alzheimer's disease using genomic and machine learning approaches**, *Daily supervisor of Adnan Kaan Ekiz for Masters of Bioinformatics* , KU Leuven.

Honors and Awards

2016	**1st Rank**, among all graduate students in Bioinformatics and Bioelectric (about 40) at AmirKabir University of Technology
2011	**3rd Rank**, among all undergraduate students in Electrical Engineering (about 35) at University of Guilan, Rasht
2012	**Awarded** candidacy for entering M.Sc. program of University of Guilan without entrance exam because of exceptional students policy.
2007	**Awarded** a four-year entrance scholarship, Faculty of Engineering University of Guilan.

Teaching Experience

Spring 2020-2023	**Teacher assistant for practical sessions**, *Bioinformatics course*, Prof. Vens, KU Leuven-Kulak campus
Spring 2020-2022	**Teacher assistant for practical sessions**, *Bioinformatics course*, Prof. Vens, KU Leuven-Kulak campus

Fall 2019	**Teacher assistant for practical sessions**, *Bioinformatics course*, Prof. Vens, KU Leuven-Kulak campus
Fall 2016	**Teacher assistant for R**, *Statistical analysis of medical data*, Dr. Ghassemi, AmirKabir University of Technology
Spring 2016	**Graduate teaching assistant**, *Advanced digital signal processing*, Dr. Almasganj, AmirKabir University of Technology
Fall 2012	**Graduate teaching assistant**, *Stochastic processes*, Dr. S. Harsini, University of Guilan

Workshops and summer schools

Winter 2019	**Milan Critical Care Datathon and ESICM's Big Datatalk**, *ESICM*, Milan, Italy
Summer 2019	**Summer School FLAMES 2019**, *FLAMES*, Gent, Belgium
Summer 2021	**4th International School on Deep Learning DeepLearn 2021 Summer**, *DeepLearn 2021 Summer*, Las Palmas de Gran Canaria, Spain
Summer 2022	**Cambridge Ellis Machine Learning Summer School**, *Cambridge Ellis*, Cambridge, UK

The Cambridge Ellis Machine Learning Summer program accepted me and provided me with a travel grant.

Technical Skills

Programming	Python, R
Processor	LaTeX, Microsoft office

References

Supervisor	**Jonathan H. Chen, MD, PhD**, *Assistant Professor*, Center for Biomedical Informatics Research, Faculty of Medicine, Stanford University CA 94305, USA
PhD Supervisor	**Prof. dr. Celine Vens**, *Associate Professor*, Faculty of Medicine, KU Leuven, Kulak Kortrijk, Belgium
PhD Co-supervisor	**Prof. dr. Hans Pottel**, *Professor*, Faculty of Medicine, KU Leuven, Kulak Kortrijk, Belgium
PhD Co-supervisor	**dr. Wouter De Corte**, *Anesthesiologist, Intensivist*, Department of Intensive Care Medicine, AZ Groeninge Hospital Kortrijk, Belgium
PhD Co-supervisor	**dr. Liesbeth Viaene**, *Nephrologist*, Nephrology center, AZ Groeninge Hospital Kortrijk, Belgium