

Fateme Nateghi Haredasht

Curriculum Vitae

Experience

- Sep 2023 – **Postdoctoral Scholar**
Present ◦ **Stanford Center for Biomedical Informatics Research, School of Medicine**
◦ **Supervisor: Dr. Jonathan H. Chen, MD, PhD**
Stanford University, USA
- Jan 2023 – **Postdoctoral researcher**
July 2023 ◦ **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 Sabovčík, 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.

- 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

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- 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 L^AT_EX, 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
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