

NAVID SEIDI

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U.S. Permanent Resident (Green Card) – no visa sponsorship required

EDUCATION

Ph.D. in Computer Science

Jan 2022 - Expected Dec 2026

Missouri University of Science and Technology (cs.mst.edu)

Rolla, MO, USA

Dissertation: “Adaptive Federated Learning for Survival Analysis in Smart Healthcare” – defended and passed September 2026.

Advisor: **Dr. Sajal K. Das** (Curators’ Distinguished Professor, Daniel St. Clair Endowed Chair), CREWMaN Lab

M.Eng. in Information Technology (Computer Networks)

2019

B.Eng. in Information Technology

2012

PUBLICATIONS

- Shaun Wolfe, **Seidi, Navid**, Sajal K. Das, “**Federated Deep Survival Machines for Collaborative Time-to-Event Analysis**”, Accepted, 2026 IEEE International Conference on E-health Networking, Application & Services (Healthcom), 2026.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, “**Adaptive Bayesian Partner Selection for Federated Clinical Centers**”, arXiv preprint, 2026.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, “**HARMONY: Hybrid Aggregation and Reputation Mechanism for Cooperative Federated Survival Analysis**”, IEEE Journal of Biomedical and Health Informatics (JBHI), accepted September 2026.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, “**Federated Learning Framework for Survival Analysis in Healthcare**”, in *Federated Learning: Foundations and Applications*, 1st ed., R. Buyya, A. Mukherjee, and S. K. Das, Eds., Morgan Kaufmann, 2026, ch. 17, pp. 287–302.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, “**Evolving Sparse P2P Networks for Federated Survival Prediction with Adaptive Utility**”, Accepted to be published in 2026 IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE), Pittsburgh, PA, USA, Aug. 2026.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, “**Enhancing Federated Survival Analysis through Peer-Driven Client Reputation in Healthcare**”, arXiv, 2025.
- **Seidi, Navid**, Satyaki Roy, Sajal K. Das, Ardhendu Tripathy, “**Addressing Data Heterogeneity in Federated Learning of Cox Proportional Hazards Models**”, 2024 IEEE International Conference on E-health Networking, Application & Services (Healthcom), Nara, Japan, Nov. 2024.
- **Seidi, Navid**, “**A Stable Matching Assignment for Cancer Treatment Centers using Survival Analysis**”, arXiv, 2024.
- **Seidi, Navid**, Ardhendu Tripathy, Sajal K. Das, “**Using Geographic Location-based Public Health Features in Survival Analysis**”, 2023 IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE), Orlando, FL, USA, Jun. 21-23, 2023.
- **Seidi, Navid**, Eshghi, Farshad and Kelarestaghi, Manoochehr, “**PV2MS: Patient Virtual Visitation Management System in the Context of a Smart City**”, Proceedings of IEEE EUROCON 2019 - 18th International Conference on Smart Technologies, Novi Sad, Serbia, Jul. 1-4, 2019.
- **Seidi, Navid**, Eshghi, Farshad and Kelarestaghi, Manoochehr, “**VID: Virtual Information Desk**”, 2017 IEEE 41st Annual Computer Software and Applications Conference (COMPSAC), Turin, Italy, Jul. 4-8, 2017.

PATENTS

- Seidi, Navid, Ardhendu Tripathy, Sajal K. Das, “A method and systems for updating a federated survival model and generating personalized treatment recommendations.” Non-Provisional Patent Application (2026).

POSTER PRESENTATIONS

- Seidi, Navid, Sajal K. Das, “Trust-Aware Federated Survival Analysis for Translational Precision Health”, NextGen Pathways Symposium, Mar. 2026.
- Seidi, Navid, “Heterogeneity-Aware Federated Survival Analysis Delivery using Pre-Trained Large Language Models in Digital Health”, NextGen Pathways Symposium, Mar. 2025.
- Seidi, Navid, Satyaki Roy, Sajal K. Das, Ardhendu Tripathy, “Addressing Data Heterogeneity in Federated Learning of Cox Proportional Hazards Models”, Doctoral Symposium, Conference on Health, Inference, and Learning (CHIL), Jun. 2024.

RESEARCH INTERESTS

- Deep Neural Networks
- Generative AI
- Machine Learning for Healthcare
- Large Language Models
- Survival Analysis

RESEARCH PROJECTS (CREWMAN LAB, UNDER THE SUPERVISION OF DR. DAS)

SmarTreatMate: Advanced Analytics for Personalized Treatment 2022 - Present

- Developing a federated learning platform for precision in survival analysis and personalized treatment recommendations.
- Participated in Great Lakes Hub Regional W23 Medical Jumpstart and NSF National I-Corps programs. Awarded a **\$50K** NSF grant (Award #2330769); completed the NSF National I-Corps Summer 2023 cohort; conducted 157 customer-discovery interviews.
- Invited panelist at NSF I-Corps Awareness Workshops, Missouri S&T (Oct 2024, Feb 2025, Sep 2025).
- Released the open-source HARMONY reference implementation (MIT license, github.com/navidns/HARMONY) accompanying the IEEE JBHI paper.

MedAID: Portable AI Assistant for Real-Time Clinical Recommendations 2023 - Present

- Developed MedAID, a testbed powered by Nvidia Jetson Orin AGX, to virtualize healthcare centers (VCs) for real-time clinical scenario testing, offering intelligent recommendations to medical professionals for personalized treatments.
- Designed as a mobile, AI-driven clinical assistant, enabling medical practitioners to access real-time data analysis and treatment insights in diverse healthcare environments.

RESEARCH PROJECTS (SIGNET LAB. UNDER THE SUPERVISION OF DR. ESHGHI)

Smartening Hospital Workflow 2018 - 2020

Position: Manager, organizer and director

Description: Review, modify, standardize, and streamline current hospital workflow (patient flow, medical care, physical resources, and internal systems).

T-Coding (A vocabulary learning platform) 2016 - 2018

Position: iOS Developer

Description: Designing, developing, and deploying the iOS version.

RFID Based Real-Time Location System 2016 - 2018

Position: Project Manager & Software Developer

Description: Designing, developing, and deploying the Windows application.

BME (An insurance policy management application) 2014 - 2015

Position: Project Manager & Software Developer

Description: Managing the technical team and working as an iOS developer.

WORKING EXPERIENCES

Missouri University of Science and Technology - Computer Science Dept. Jan 2022 - Present
Position: Graduate Research Assistant Rolla, MO, USA

Description: Federated learning for survival analysis on heterogeneous multi-center clinical data (SEER, MIMIC-IV, TCGA) under the supervision of Dr. Sajal K. Das. Comprehensive exam passed March 2025. Mentored an undergraduate researcher for 2+ years (including the NSF REU Summer 2025 program) to an accepted IEEE Healthcom 2026 paper. Reviewer for NeurIPS 2026 (4 submissions), AISTATS 2023, Discover Public Health (Springer Nature, 2 manuscripts, 2025), and IEEE conferences; Technical Program Committee member, PerAgents Workshop at IEEE PerCom 2027; IEEE student member.

Mehregan Hospital 2019 - 2021
Position: IT Manager

Description: Managing IT department, including:

- Technical maintenance of computer systems, network infrastructure, and other IT devices
- Controlling and evaluating health-related software programs like PACS (Picture Archiving and Communication System) and Electronic Health Record (EHR)
- Controlling and monitoring the correct operation of non-health-related software programs

Applied Research Center of Vali Asr Hospital 2018 - 2019
Position: Research Assistant

Description: Working both as the manager of the research department and the health informatics researcher.

IT Department of Vali Asr Hospital 2014 - 2018
Position: Founder of Health Informatics Team

Description: Working on facilitating healthcare, patient flow, and hospital workflow using Information Technology tools.

Programmers House Institute 2013 - 2022
Position: Instructor & Freelance Software Developer

IT Department of Vali Asr Hospital 2012 - 2014
Position: Senior Electronic Health Record (EHR) Software Developer

TEACHING EXPERIENCES

NSF I-Corps Hub: Great Lakes Region 2023 - Present
I-Corps Peer Mentor Rolla, MO, USA

Missouri University of Science and Technology - Computer Science Dept. Spring 2022, Spring 2023
Course: CS 1982 MATLAB Programming Lab (Instructor of record; ≈105 students)

Programmers House Institute 2013 - 2022
*Courses: Software Development using Python
Software Development using C#
Introduction to Microsoft SQL Server
Software Development using Swift*

SKILLS

Technical

Programming Languages: Python, C++, SQL, R, MATLAB, Bash

Machine Learning & AI: Deep Learning, Federated Learning, Survival Analysis, Bayesian Methods, Reinforcement Learning, Natural Language Processing (NLP), Generative AI

LLMs & Generative AI: Transformers, LLM fine-tuning (LoRA/PEFT), prompt engineering, Retrieval-Augmented Generation (RAG), AI agents (MCP)

Deep Learning Frameworks: TensorFlow, PyTorch, PyTorch Lightning, Hugging Face Transformers and Keras

Data Science & Analytics: Pandas, NumPy, SciPy, Scikit-learn, Matplotlib and Seaborn

DevOps & MLOps: Linux, Slurm HPC, NVIDIA GPUs (CUDA), Docker, Kubernetes, AWS

Version Control & Collaboration: Git, GitHub and GitLab

Hardware: NVIDIA Jetson and Raspberry Pi

HONORS & AWARDS

- Received a \$700 Student Travel Award for participating in Conference on Health, Inference, and Learning (CHIL) 2024.
- Received \$875 NSF Student Travel Award for presenting at the IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE) 2023 and 2026.
- NSF I-Corps National Program award, \$50,000 (Award #2330769), 2023.
- Selected for the NIH/NIA BETA Biomedical Entrepreneurship Training fellowship (\$6,000), 2024 (offer declined).

HOBBIES & INTERESTS

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| • Reading | • Playing Soccer | • Watching movies & TV Series | • Playing video games |
| • Listening to Music | • Cooking | | |

REFERENCES

Sajal K. Das (Ph.D. Advisor)

Professor and Daniel St. Clair Endowed Chair

Department of Computer Science, Missouri University of Science and Technology

E-mail: sdas@mst.edu

Ardhendu Tripathy (Ph.D. Co-Advisor)

AI Lead, OpsCanvas

E-mail: ardhendutr@gmail.com

Satyaki Roy

Assistant Professor, Department of Mathematical Sciences, University of Alabama in Huntsville

E-mail: sr0215@uah.edu