

836 N, 20th Street, Apt 42
Milwaukee, WI 53233

(414) 629-9087
parama.sridevi@marquette.edu
linkedin.com/in/paramasridevi

Parama Sridevi

Ph.D. Candidate

Experience

Graduate Assistant

Advisor: Dr. Sheikh Iqbal Ahamed

Marquette University, USA

Spring 2021 - present

- Conducting research on several mHealth, Machine learning and non-invasive technology projects
- Delivering lecture in COSC 1010 (Python) lab, grading assignments

Lecturer

Electrical and Electronic Engineering (2 years)

BSMRSTU, Bangladesh

Nov 2018 - Dec 2020

- Supervised projects and thesis, conducted class and lab on Digital signal processing, Linear signal and systems

Education

Ph.D. in Computer Science (Running CGPA: 4.00)

Department of Computer Science

Marquette University, USA

Spring 2021 – Ongoing

- **Research area:** mHealth, Machine Learning, Non-invasive Technologies, Data Science, Signal Processing
- **Important Courses:** Advanced Machine Learning, Database Systems, Software Development

M.S. in Biomedical Engineering (CGPA: 3.91)

Department of Biomedical Physics and Technology

University of Dhaka, Bangladesh

Nov 2017 – Apr 2019

- **Thesis:** A Feasibility Study of Non-invasive Blood Glucose Level Detection Using NIR Optical Reflectance

B.Sc. in EEE (CGPA: 3.66)

Department of Electrical and Electronic Engineering

BUET, Bangladesh

Feb 2013 – Sep 2017

Projects

- **Non-invasive Blood Component Detection:** Developing device and applying machine learning algorithms to non-invasively measure blood Creatinine, CrCl, GFR, Glucose, Hemoglobin, HbA1C from fingertip video collected by smartphone using near-infrared LED
- **Post-covid Symptom Analysis:** Data cleaning and statistical analysis of post-covid symptoms data collected by interviewing 4500 patients to assess effects of Covid-19
- **Children Feeding Response Analysis:** Analysis of acceptance rate and feeding response of children from three different age groups with various food types provided
- **Social and Physical Activity Detection:** Developing smartphone and sensor-based physical and social exertional activities measurement tools for patients with illness-limiting capacities

Skills

- Strong knowledge of MySQL, Oracle, Python, Scikit learn, Pandas, NumPy
- Strong working experience in data pre-processing, data cleaning and machine learning algorithms such as XG-Boost, Kernelized KNN, Random Forest Classification etc.
- Working experience in statistical analysis with ANOVA, Post hoc analysis, T-test
- Hands on knowledge on TensorFlow, Keras, R, Django

Publications

- **Published**

1. **Sridevi, Parama**, Masud Rabbani, and Sheikh Iqbal Ahamed. "A Comprehensive Study for Predicting Chronic Kidney Disease, Diabetes, Hypertension, and Anemia by Machine Learning and Feature Engineering Techniques." *2023 IEEE International Conference on Digital Health (ICDH)*. IEEE, 2023.
2. **Sridevi, Parama**, ASM Shamsul Arefin, and Abu Shahadat Md Ibrahim. "A feasibility study of non-invasive blood glucose level detection using Near-Infrared Optical Spectroscopy." *Bangladesh Journal of Medical Physics* 14.1 (2021).
3. **Sridevi, Parama**, et al. "Towards Developing a Mobile-Based Care (KidneyCare) for Patients with Kidney Diseases Using Ten-second Fingertip Video and PPG with Machine Learning." *2023 IEEE International Conference on Digital Health (ICDH)*. IEEE, 2023.
4. **Sridevi, Parama**, Zawad Arefin, and Sheikh Iqbal Ahamed. "Noninvasive Creatinine Estimation from PPG Signal Using ML Models with Optuna." *Available at SSRN* 4694259.
5. Delaney, Amy L., Ericka Diestler, **Parama Sridevi**, Arafat Mahmood, and Sheikh Iqbal Ahamed. "Acceptance of bite presentations and feeding behaviors of 8 to 12-month-old infants: A reflection of typical feeding development." *Physiology & Behavior* 276 (2024): 114463.
6. Alam, Kazi Shafiul, Sayed Mashroor Mamun, Masud Rabbani, **Parama Sridevi**, and Sheikh Iqbal Ahamed. "UbiHeart: A novel approach for non-invasive blood pressure monitoring through real-time facial video." *Smart Health* (2024): 100473.
7. Shrestha, Deepak Sundar, Arafat Mahmood Rahat, **Parama Sridevi**, Bimal Sharma Chalise, Sagar Kumar Rajbhandari, Anup Bastola, Parmananda Bhandari, Sheikh Iqbal Ahamed, and Richard R. Love. "A Consecutive Series Study of the Frequencies, Intensities, and Natural History of Symptoms Following COVID-19 Infection in Nepali Men." *Journal of Nepal Health Research Council* 21, no. 1 (2023): 40-45.
8. Mahmood, Arafat, **Parama Sridevi**, and Sheikh Iqbal Ahamed. "Demo paper: A package of objective measurement tools for physical and social exertional activities for patients with illness-limiting capacities." *2022 IEEE/ACM Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE)*. IEEE, 2022.
9. Rabbani, Masud, Sayed Mashroor Mamun, **Parama Sridevi**, Iysa Iqbal, Anubhav Parida, Anushka Kolli, Hansika Kolli et al. "A Chaos-Based Non-Linear Analysis Method for Detecting Human Attention Levels in EEG Signals." In *2023 IEEE 23rd International Conference on Bioinformatics and Bioengineering (BIBE)*, pp. 201-204. IEEE Computer Society, 2023.
10. **Sridevi, Parama**, et al. "Sign Language recognition for Speech and Hearing Impaired by Image processing in matlab." 2018 IEEE Region 10 Humanitarian Technology Conference (R10-HTC). IEEE, 2018.
11. **Sridevi, Parama**, et al. "A Low-cost venturi tube spirometer for the diagnosis of COPD." TENCON 2018-2018 IEEE Region 10 Conference. IEEE, 2018.

● **Accepted**

1. **Parama Sridevi**, Padmapriya Velupillai Meikandan, Paramita Basak Upama, Masud Rabbani, Kazi Shafiul Alam, Dipranjan Das and Sheikh Iqbal Ahamed, "ML-based Chronic Kidney Disease and Diabetes Prediction With Feature Effect Analysis Using SHAP", IEEE COMPSAC 2024.
2. Paramita Basak Upama, **Parama Sridevi**, Masud Rabbani, Kazi Shafiul Alam and Sheikh Iqbal Ahamed, "Natural Language Processing for recognizing Bangla speech with regular and regional dialects: A survey of algorithms and approaches", IEEE COMPSAC 2024.
3. Arafat Mahmood, **Parama Sridevi**, Masud Rabbani, Padmapriya Velupillai Meikandan, Mohammad Syam, Syeda Shefa, William Chu and Sheikh Iqbal Ahamed, "CFSCare: ML-based Activity Monitoring System for Chronic Fatigue Syndrome Patients Using Smartphone and Wrist Sensor", IEEE COMPSAC 2024.
4. Arafat Mahmood, **Parama Sridevi**, Padmapriya Velupillai Meikandan and Sheikh Iqbal Ahamed "Survey on Objective Measurement and Sensor-Based Detection of Physical and Social Activities", IEEE COMPSAC 2024.
5. Masud Rabbani, Subarna Alam, Md. Raihan Mia, Anubhav Parida, Iysa Iqbal, Hansika Kolli, **Parama Sridevi**, Kazi Shafiul Alam, Paramita Basak Upama, Rumi Ahmed Khan and Sheikh Iqbal Ahamed

“Listening to the Brain: A Novel Approach to Understanding Cerebral Dynamics through Blood Flow Sounds”, IEEE COMPSAC 2024.

- ***Under Review***

1. **Parama Sridevi**, Masud Rabbani, Md Hasanul Aziz, Paramita Basak Upama, Sayed Mashroor Mamun, Rumi Ahmed Khan, Sheikh Iqbal Ahamed, “Quantum Machine Learning based Non-invasive Estimation of Blood Glucose and HbA1c from Ten-second Fingertip Video”, Machine Learning with Applications (Elsevier Journal).
2. **Parama Sridevi** et al. “Performance Comparison of Quantum and Classical Machine Learning Models for Chronic Kidney Disease Prediction”, Connection Science (Taylor & Francis Journal).
3. **Parama Sridevi**, Kazi Zawad Arefin, Dipranjan Das, Rumi Ahmed Khan and Sheikh Iqbal Ahamed, “Noninvasive ML-based BUN Prediction from Ten-second Fingertip Video using Generative AI”, IEEE COMPSAC 2024
4. Paramita Basak Upama, **Parama Sridevi**, Masud Rabbani, Mohammad Syam, Abul Hasan Muhammad Bashar, M. Rubaiyat Hossain Mondal, Rumi Ahmed Khan and Sheikh Iqbal Ahamed, “A Comparative Study of Classical and Quantum Algorithms for Heart Disease Prediction Using Patients' Vital Signs”, IEEE COMPSAC 2024.
5. Nafi Us Sabbir Sabith, **Parama Sridevi**, Masud Rabbani, Kazi Zawad Arefin and Sheikh Iqbal Ahamed “Towards a Multi-model Comparative Study for Non-invasive Hemoglobin Level Prediction from Fingertip Video”, IEEE ICDH 2024.

