SONISH SIVARAJKUMAR

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OVERVIEW

An innovator and a problem solver, who loves to build new healthcare products and solutions using Machine Learning and Artificial Intelligence. A Deep Learning Researcher, who is in search of the right mentor, aspiring to bring groundbreaking research outcomes in the field of Applied Machine Learning and Deep Learning in Medical Sector. University top-scorer and scored perfect 10 GPA in final semester.

EDUCATION

Qualification	Board/University	Year of Passing	CGPA/Percentage
Ph.D (Intelligent Systems – Artificial Intelligence)	University of Pittsburgh, PA, USA	2021-2025	Ongoing
B.Tech (Electrical Engineering)	Government Engineering College , Thrissur, India (APJ Abdul Kalam Technological University)	2016-20	8.8/10 (3.9/4) First Class with Honours (Rank Holder)
Higher Secondary	S.M.T.G.H.S.S	2016	98.5%

CREDENTIALS

WORK EXPERIENCE

- **UPMC Hillman Cancer Center - PhD Researcher** **August 2021 - Present**
  Areas : ML / AI, Interpretable AI, Causal Inference, Metagenomics, Cancer Genomics, Drug Discovery & Precision Medicine
- **IQVIA – Senior Data Scientist** **May 2020 – August 2021**
  Areas : Machine Learning , Big Data , Time Series Analysis, Health Care Analytics, NLP
- **Khader's Labs – Researcher (Part time)** **July 2020 – Present**
  Lab Head : Dr Shameer Khader, PhD - Senior Director, AI, AstraZeneca
  Areas : Graph Neural Networks, Dental Informatics, Cancer Genomics, Applied AI in Healthcare

INTERNSHIP EXPERIENCES

- **FRACTAL – Data Scientist Intern** **August 2019 – May 2020**
  Areas : Risk Analytics , Customer Analytics, Data Analytics , Deep Learning

- **INTERNATIONAL CENTRE FOR FOSS (ICFOSS) – Jr Research Fellow** **May 2019 – August 2019**
  Project : Open IoT – Taurus Care
  Areas : Data Analytics , Artificial Intelligence. IoT, LoRa Communication , Edge Computing

STARTUP EXPERIENCE

- **Start Up – Co-Founder & Head of Data Science** **August 2018 - May 2019**
  Head of the AIML team of 4 members. Developed a set of AI and Robotics solutions on Healthcare, which was acquired by Rajagiri Medical college, Kochi.
  Areas : Intelligent Systems, Machine Learning , Deep Learning , Robotics

RESEARCH PAPERS

- **Computational methods for delineating spatially informed cell context-specific regulatory programs**
- **A Data-Driven Survey To Understand Oral Microbiome-Neuropsychiatry Landscape**
- **Investigation on the Effect of Transcription Factor Cascades in the Human Genome (TFCascades)**
- **LoRa Cattle Tracker and Precision Livestock Farming using IoT and Analytics**
- **Impact of Big Data and Analytics in Power and Energy Sector**

TECHNICAL SKILLS

- Languages **:** ***Python, R, Java, C***
- ***Machine Learning , Deep Learning***
- ***Tensorflow , Keras***
- ***Robotics***
- ***Git***
- ***AWS***
- ***PySpark***
- ***Data Analytics , NLP***
- ***Matlab***
- ***CDSW***

CORPORATE PROJECTS

- **CLINCAL TRAILS CLASSIFICATION PIPELINE USING NLP (IQVIA Asia Pacific)**
  Developing a tool using Natural Language Processing that automates the manual process of analyzing large amounts of text heavy info of clinical trials to find the relevant and key insights.

- **ACCELERATOR FOR SEGMENTATION AND TARGETING (IQVIA Asia Pacific)**
  Using UI, all the analysis performed to reach to final segmentation and clustering results. This will use additionally leverage ML supervised and unsupervised learning for better clustering (using raw KPIs of HCPs)

- **INTELLIGENT MEDICAL ASSISTANT ROBOT USING AI**
  Baybot is a health care companion that can take the place of a nursing staff to carry out tasks like providing medicines to patients at correct intervals , dealing with queries for medical advice, making ward rounds autonomously

- **LoRa BASED CATTLE MANAGEMENT SYSTEM (IoT and AI) (ICFOSS, India)**
  The dairy cattle-focused platform elements comprise a robust, high node count sensor network with a neck mounted collar engine gathering activity data from individual animals and a cloud based software environment that manages on-farm data and pro-actively alerts the farmer, real time of key operational and management interventions

- **AUTOMATED POWER FACTOR CORRECTION BASED ON DEEP LEARNING**
  Research project on a power factor improvement tool based on artificial neural networks focusing on the compensation of reactive power, consequently improving the voltage stability

ADDITIONAL ACADEMIC EXPERIENCES

- **Artificial Intelligence and Machine Learning , IIT Madras and ASAP (Ongoing)**
- **Robotics Specialization, University of Pennsylvania (Ongoing)**
- **Digital Circuits , IIT Kharagpur**
- **Machine Learning , Stanford**
- **IBM Data Science Professional Certification**
- **Deep Learning and Neural Networks, deeplearning.ai**

LEADERSHIP ROLES

- Blogger , Medium.com
- Dean, School Of AI , an Organization of AI Enthusiasts (2019-present)
- **IEEE** Vice Chairman(2019-2020)
- Lead, Technical Team, Kerala Flood Relief
- Event Manager, Kerala Technological Conclave 2019
- Lead, Google DSC(2018-19)
- **IEEE** SIGHT Secretary (2018-19)

ACHIEVEMENTS

- Accepted for Institutional **Patent** submission under **Kerala State Council for Science, Technology and Environment (KSCSTE)**
- Invited to present paper MEDVENDOR at **IEEE R10 Asia Regional Conference 2018, Indonesia**
- Invited to present paper on Automated Power Factor Improvement Based on Artificial Neural Networks **at Intelligent Systems Conference 2019 at London, United Kingdom**
- Selected for Artificial Intelligence & Machine Learning Program by **IIT Madras and Department of Higher Education Kerala**
- Received Idea Grant for AI project from **Kerala Startup Mission**
- Finalists **SOP , National level project presentation competition**
- Won 1st price in **KSEB Seminar Series (Topic: Impact of Data analytics in Electrical Sector)**

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