CHRISTY GEORGE

Research Assistant

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EDUCATION

- MSc. in **Computational Biology specialization in Machine Learning** *2022-2024*

  Department of Computational Biology and Bioinformatics, University of Kerala, India
  Grade: A (CGPA 8.18 out of 10)
- BSc. in **Electronics** *2018-2021*

  Mahatma Gandhi University, Kerala, India
  Grade: A (CGPA 8.11 out of 10) | University Rank: 7

RESEARCH EXPERIENCE

- **Research Assistant** *1st Aug 2024 – present*

  Department of Chemistry, CMS College Kottayam

  Supervisor: Dr. Vibin Ipe Thomas

  Project: **Machine Learning Applications for Discovering and Optimizing Singlet Fission Materials in Advanced Solar Cells**

  This project focuses on applying machine learning techniques to discover and optimize singlet fission materials, aiming to enhance the efficiency of advanced solar cells.

- **M.Sc. Research Project** *5th Feb 2024 – 31th July 2024*

  Sree Chitra Tirunal Institute for Medical Sciences & Technology, Trivandrum, India

  Supervisor: Dr. Kamalesh K. Gulia

  Project: **Computational Approaches to Evaluate EEG Correlates of Relaxation**

  This study analyzes EEG data to classify relaxation states in eyes closed supine and sitting postures by measuring relative power of alpha and theta wave, employing machine learning techniques like Support Vector Machine (SVM) for effective differentiation.

- **Research Intern** *11th Nov 2023 – 31st Jan 2024*

  Indian Institute of Information Technology, Kottayam, Kerala, India

  Supervisor: Dr. Manu Madavan

  Project: **Classification of Alzheimer's related miRNAs**

  This project aims to develop a method to classify microRNAs associated with Alzheimer's disease. This involves using machine learning techniques to analyze miRNA data and identify patterns that differentiate between healthy and Alzheimer's affected individuals.

- **B.Sc. Research Project** *1st Jan 2021 – 10th April 2021*

  Department of Electronics, Aquinas College, Ernakulam, Kerala, India

Supervisor: Dr. Vijo M Joy

Project: **IoT Based circuit breaker**

IoT-based Circuit Breaker is a system that quickly controls electrical loads using an interconnection network. It uses a local Wi-Fi module and Arduino to connect to the internet and an LCD display to show the state of each connected load as On or Off.

TECHNICAL SKILLS

- Very good in Python programming.
- Very good experience in programming with MATLAB and using MATLAB toolboxes.
- Basic knowledge in Latex.
- Very good experience in EEG acquisition using Axxonet xAMP device (32 electrodes, 10-20 international system).
- Very good experience in EEG data analysis using Axxonet BESS (Brain Electro Scan Software) and EEGLAB.
- Good experience in EEG data analysis using MNE-Python.
- Proficient in statistics using Prism GraphPad and R; experienced in performing regression analysis, ANOVA tests, Principal Component Analysis and Multivariate Analysis.
- Very good experienced in Data analysis tools: NumPy, Pandas, Matplotlib, Seaborn.
- Good experience in Machine Learning and Deep Learning frameworks: Scikit-learn, TensorFlow and PyTorch, Keras.
- Very good in Windows and Linux operating system.

ACHIEVEMENTS

- Secured 7th position in B.Sc. Electronics, Mahatma Gandhi University, 2018 – 2021
- **ACM Summer School Scholar:** Selected among the top 40 students all over India for ACM Summer School on Algorithmic Technique in Computational Biology at Indian Institute of Technology Hyderabad, sponsored by TCS Life Science Research.

TRAINING PROGRAMS, CONFERENCES, WORKSHOPS

- Attended a 1-day Workshop on Visual Molecular Dynamics, conducted by the **Department of Computational Biology & Bioinformatics, University of Kerala** in 2022.
- Participated in and served as the organizing committee member at the 7th International Conference on "Sustainable Utilization of Tropical Plant Biomass", **Department of Computational Biology & Bioinformatics, University of Kerala** in collaboration with **Lund University**, Sweden 2022.

PUBLICATIONS

Submitted Articles

- Christy George, Kamalesh K. Gulia. "*Machine learning approaches to evaluate EEG correlates of relaxation between supine and sitting postures in eyes closed condition"* (Submitted on Annals of Neurosciences).

REFERENCE

- **Prof. Achuthsankar S Nair**
  Former head of the department
  Department of Computational Biology and Bioinformatics
  University Of Kerala
  Trivandrum, Kerala, India
  Email: sankar.achuth@gmail.com
  Google Scholar link: https://scholar.google.com/citations?hl=en&user=wIHOQTIAAAAJ

- **Dr. Kamalesh K. Gulia**
  Scientist G
  Division of Sleep Research
  Biomedical Technology wing
  Sree Chitra Tirunal Institute for Medical Sciences & Technology Trivandrum, Kerala, India
  Email: kkgulia@sctimst.ac.in
  Google Scholar link: https://scholar.google.co.in/citations?user=37SyotrnpGgC&hl=en

- **Dr. Vibin Ipe Thomas**
  Assistant Professor
  Department of Chemistry,
  CMS College (Autonomous), Kottayam,
  Kerala, India
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  Google Scholar link: https://scholar.google.com/citations?hl=en&user=Q9QgjcEAAAAJ