Niveditha S

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SUMMARY

In the dynamic world of biotechnology, I, Niveditha S, am an enthusiastic explorer, currently advancing through the penultimate stage of my academic voyage at Rajalakshmi Engineering College. Fueled by a deep fascination for molecular biology, genetic engineering, and bioprocessing, I am dedicated to pioneering advancements in the field. With an unyielding curiosity and a drive to push boundaries, I am committed to leveraging my academic and practical skills to drive innovation in biotechnology. Additionally, despite my major in Biotechnology, I possess a keen interest in Computer Science, which I aim to integrate into my career path to contribute to groundbreaking research and innovation.

EDUCATION

- **Bachelor of Technology** [August 2021 – Present]
  Biotechnology
  Rajalakshmi Engineering College, Tamil Nadu, India.
  Cumulative GPA: 8.01/10
- **Higher Secondary Education (10+2)** [May 2019]
  SBOA School & Junior College, Tamil Nadu, India.
- **Secondary School Education (10)** [May 2017]
  SBOA School & Junior College, Tamil Nadu, India.
  GPA: 9.2/10

SKILLS

- **Molecular Biology:** DNA/RNA Extraction, Gene Cloning, Gene Expression Analysis, Recombinant DNA Technology
- **Bioinformatics Skills:** Sequence Alignment, Genomic Analysis, Data Mining, Database Management (NCBI, GenBank, etc.), Molecular Modeling
- **Wound Healing:** Wound Assessment Techniques, Cellular Mechanisms of Wound Healing, Growth Factors and Cytokines in Wound Healing, Biomaterials for Wound Dressing, Tissue Engineering Approaches
- **Laboratory Techniques:** PCR (Polymerase Chain Reaction), Gel Electrophoresis, DNA Sequencing, Cell Culture Techniques, Immunohistochemistry, Flow Cytometry, ELISA (Enzyme-Linked Immunosorbent Assay).
- **Cell Biology:** Cell Culture Maintenance, Cell Viability Assays, Cell Proliferation and Apoptosis
- **Technical Skills:** Teamwork, Time Management, Problem-Solving, Adaptability, Communication Skills
- **Research Skills:** Scientific Writing, Literature Review, Experimental Design, Data Interpretation and Analysis, Presentation Skills

RESEARCH PROJECTS

- **Accurate Brain Tumor Segmentation and Detection using Multi-Task Learning with GlobalNet and FusionNet**
- **Neural Image Caption Generation with Visual Attention: Enabling Image Accessibility for the Visually Impaired**
- **Kernelized Deep Networks for Speech Signal Segmentation Using Clustering and Artificial Intelligence in Neural Networks**
- **Cluster-based grid computing on wireless network data transmission with routing analysis protocol and deep learning**
- **Implementation of Machine Learning in VLSI Integrated Circuit Design**
- **Design and Development of Smart Wearable-Technology Enhanced Learning for Specially Abled students**
- **An Advanced Fully Residual Convolutional Neural Network for Segmentation and Classification of Brain Tumors across Diverse Medical Image Modalities**
- **Predicting Malware Classification and Family using Machine Learning: A Cuckoo Environment Approach with Automated Feature Selection**
- **Memory-Augmented Deep Recurrent Neural Networks for Long-Term Dependency Learning in Natural Language Processing**
- **NLP Based Al-Driven Resume Screening Solution for Efficient Candidate Selection**

INTERNSHIP EXPERIENCE

- **Bioinformatics Intern** at *KaaShiv InfoTech Pvt Ltd.* [January 2023]
  - Gained hands-on experience in sequence alignment, genomic analysis, and database management.
  - Developed proficiency in utilizing bioinformatics tools and software to analyze biological data sets, contributing to projects focused on genetic research and molecular biology.
  - Enhanced my problem-solving skills by troubleshooting and optimizing bioinformatics pipelines for efficient data processing.
- **Microbial Biofilms Intern** at *Centre of Excellence in Biofilms.* [June 2023 – July 2023]
  - Gained experience in studying oral biofilms and conducting typodont model testing.
  - Developed skills in nanocomposite coating techniques and mastered the extraction of exopolysaccharides, enhancing my understanding of biofilm formation and management strategies.
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PUBLICATIONS

1. S. Shreyanth, S. Niveditha and V. Kathiroli, Accurate Brain Tumor Segmentation and Detection using Multi-Task Learning with GlobalNet and FusionNet, 2023 IEEE 12th International Conference on Communication Systems and Network Technologies (CSNT), Bhopal, India, 2023, pp. 478-485. https://doi.org/10.1109/CSNT57126.2023.10134722

2. S. Niveditha, S. Shreyanth, V. Kathiroli, P. Agarwal and S. Ram Abishek, Kernelized Deep Networks for Speech Signal Segmentation Using Clustering and Artificial Intelligence in Neural Networks, 2023 IEEE 12th International Conference on Communication Systems and Network Technologies (CSNT), Bhopal, India, 2023, pp. 667-674. https://doi.org/10.1109/CSNT57126.2023.10134609
3. Shreyanth S. and Niveditha S. (2023); CLUSTER-BASED GRID COMPUTING ON WIRELESS NETWORK DATA TRANSMISSION WITH ROUTING ANALYSIS PROTOCOL AND DEEP LEARNING Int. J. of Adv. Res. 11 (Jun). 517-534. http://dx.doi.org/10.21474/IJAR01/17096
4. Priyanka Agarwal, Niveditha S, Shreyanth S, Sarveshwaran R, Rajesh P K, Neural Image Caption Generation with Visual Attention : Enabling Image Accessibility for the Visually Impaired, International Journal of Scientific Research in Science, Engineering and Technology(IJSRSET), Print ISSN : 2395-1990, Online ISSN : 2394-4099, Volume 10, Issue 3, pp.562-575, May-June-2023. https://doi.org/10.32628/IJSRSET23103151
5. Shreyanth, S., Harshitha, D.S. & Niveditha, S. Implementation of Machine Learning in VLSI Integrated Circuit Design. SN COMPUT. SCI. 4, 137 (2023). https://doi.org/10.1007/s42979-022-01580-5
6. S., Shreyanth & Suwetha, P. & Kathiroli, V. & Niveditha, S. & Jayaprakash, Harshitha. (2023). Fintech, Crisis, and Marketing: How Technology-Driven Financial Firms Adapt Their Approach to Retain Customers. 10.2991/978-94-6463-162-3_28.
7. Sethuraman, Bhalashri & Niveditha, S. (2023). Cerebrovascular Accident Prognosis using Supervised Machine Learning Algorithms. 1-8. 10.1109/WCONF58270.2023.10235122.
8. Niveditha S, Prianka RR, Sathya K, Shreyanth S, Nandhagopal Subramani, Balakrishnan Deivasigamani and Karthikeyan S, Predicting Malware Classification and Family using Machine Learning: A Cuckoo Environment Approach with Automated Feature Selection, International Conference on Machine Learning and Data Engineering (ICMLDE), 2023 (In Production)
9. Shreyanth S, Karthikeyan S, Prianka RR and Niveditha S, Memory-Augmented Deep Recurrent Neural Networks for Long-Term Dependency Learning in Natural Language Processing, Advanced Intelligent Systems, 2023 (in review)
10. Karthikeyan S, Shreyanth S, Niveditha S, Naveen S, Santhi G B and Gopirajan PV, An Advanced Fully Residual Convolutional Neural Network for Segmentation and Classification of Brain Tumors Across Diverse Medical Image Modalities, Computers in Biology and Medicine, 2023 (in review)
11. Sarveshwaran R, Karthikeyan S, Meenalosini V. Cruz, Shreyanth S, Niveditha S and PK Rajesh, NLP Based Al-Driven Resume Screening Solution for Efficient Candidate Selection, 9th International Congress on Information and Communication Technology (ICICT), 2023 (In Production)
12. Shreyanth S, Harshitha D S, Priyanka Agarwal, Kathiroli V and Niveditha S, Design and Development of Smart Wearable-Technology Enhanced Learning for Specially Abled Students, 2nd International Conference on Best Innovative Teaching Strategies (ICON-BITS), 2023 (In Production)

BOOK CHAPTER

- Advancing Digital Forensic Intelligence: Leveraging EdgeAl Techniques for Real-time Threat Detection and Privacy Protection Niveditha S, Shreyanth S, Delshi Howsalya Devi R, Sarveshwaran R and Rajesh P K Book titled Big Data & Edge Intelligence for Enhanced Cyber Defence: Principles and Research' - CRC Press, 2023 (in Production)
- Brain Computer Interfaces for elderly and disabled person Niveditha S, Shobana D, Visudha S, and Yazhini PM Book titled Machine Learning Models and Architectures for Biomedical Signal Processing' - Elsevier, 2023 (in Production)
- Functionalisation Strategies of Silver Nanoparticles P Rajasekar, Niveditha S, Visudha S, Yazhini PM,

and Shobana D – Springer Nature, 2023 (in Production)

Intellectual Property (Patent & Copyright)

- Shreyanth Srikanth , Renangi Sandeep, Dr. Jayachandran Shanmuga Sundaram, Rajesh Perinkulam Krishnan, Niveditha Srikanth, Manpreet Singh, Dr. Ashok Kumar Katta, "Artificial Intelligence based nano robotic arm to operate endoscope motion", UK Design Patent, Design number: UK 6291782.
- Shreyanth S and Niveditha S, "Enhanced Tool for Efficient Video Organizer and Splitter with Multithreading", ROC Number: SW-16203/2023.

Academic Project

- **Cerebrovascular Accident Prognosis using Supervised Machine Learning Algorithms**
- **A Multi-functional Aqueous Phytochemical Formulation for Minimalist Skincare and Urticaria Management**
- **Bio-Responsive Adhesive Dressing System with Controlled Cracking for Enhanced Wound Healing and pH Monitoring**
- **Innovative Biodegradable Spray Container with Microbe-Resistant Coating and Dual Nozzle Technology**
- **FluoroCNN: CNN based Fluorescent Neuronal Cell Analysis and Tracking**

Awards

- **DISS FEST 2024 (First prize in the Oral Presentation, April 2024)** issued by *Department of Pharmaceutical Technology, UCE, BIT Campus, Anna University, Tiruchirappalli*
  - Recognized for outstanding presentation and Product exhibition for "A Multi-functional Aqueous Phytochemical Formulation for Minimalist Skincare and Urticaria Management".
- **ENIGMA 2023 (Second prize in the Poster Competition, October 2023)** issued by *Sri Manakula Vinayagar Engineering College, Madagadipet, Puducherry*
  - Recognized for outstanding presentation for " Optimization of the Ex-vivo Typodont Model for dental biofilm associated infections".

Certifications

- CS50X, CS50P, and CS50AI from Harvard University.
- Statistical Learning, Relational Algrbra, CS 101, and Algorithms: Design and Analysis I & II from Stanford University.
- Applied Data Science Module I & II from WorldQuant University.
- Big Data, and Advanced Algorithms and Complexity from University of California - San Diego (Coursera).

- Python for Everybody from University of Michigan (Coursera).
- Accelerated Computer Science Fundamentals Specialization from University of Illinois at Urbana-Champaign (Coursera).
- Computer Vision Basics from State University of New York at Buffalo (Coursera).
- Discrete Mathematics, and Machine Learning (ML) from Indian Institute of Technology, Madras (NPTEL).
- Database Management System (DBMS) from Indian Institute of Technology, Kharagpur (NPTEL).
- Mathematics for Machine Learning from Imperial College London (Coursera).
- Professional Diploma Program in Software Engineering from European Open University.
- Machine Learning with Python from FreeCodeCamp.
- AWS Solutions Architect Associate & CCNA Training from Network Geek.
- Databricks, Cloud, DBT and Business Communication from Indium Academy.
- Fundamentals of Digital Marketing and Advanced Google Analytics from Google Digital Garage and Google Analytics Academy.
- Software Development from Pankaj Sir Academy.
- Software Development and Testing from QSpiders Academy.

Social Volunteering Experience

- Member of Youth Red Cross (YRC) Club at Rajalakshmi Engineering College
- Member of Organizing Committee for National Conference on 'Innovations in Management of Lifestyle Diseases' (EMBIOS 2024)
- Content Writer at Scioverleaf
- Editor at BioSparklense

Competitons & Hackathons

- Finalist in Google GenAI APAC Edition
- Finalist at Walmart Sparkathon
- Top 10 performer at Databricks Sparkwars hackathon
- Participant and Innovative Solution Approacher at FutureSkills Prime 24Hr AI Challenge
- Participant at hackCBS 4.0
- Participant at TechGig Code Gladiators
- Participant at Google Cloud Community Days
- Participant at Hacktoberfest
- Participant at TeamCodeManiac
- Participant at Smart India Hackathon (SIH)

- Finalist at HackerTech
- Participant at Kurukshetra

Panel Membership & Roles

- Reviewer for Neural Networks (E-ISSN: 1879-2782), an Elsevier Journal with IF 7.8 & Cite Score 14.5.
- Reviewer for IJIN (E-ISSN: 2666-6030), a Elsevier Journal with IF 7.9.
- Reviewer for IJECE (E-ISSN: 2722-2578), a Scopus indexed journal.
- Reviewer for IJMLC (E-ISSN: 1868-808X), a Springer journal indexed in Scopus.
- Reviewer for IJCDS (E-ISSN: 2210-142X), a Scopus indexed journal.
- Editorial Board Member for PriMera Scientific Engineering Journal (ISSN: 2834-2550).
- Reviewer for Medicon Engineering Themes Journal (ISSN: 2834-7218).
- Reviewed for 15+ Conferences which are IEEE/Springer-organized conferences indexed in Scopus.
- Review Committee Member for ICCCE 2023.

Interests

- Artificial Intelligence (AI), Machine Learning, Deep Learning, NLP,
- Big Data Analytics, Data Engineering and Data Science
- Cloud Computing, Networking and Distributed Systems
- Software Engineering and Architectural Design
- Big Data Analytics, Data Engineering and Data Science
- Cloud Computing, Networking and Distributed Systems
- Software Engineering and Architectural Design