

Siddharth Senthilkumar

Email | LinkedIn | Website

EDUCATION

University of Texas at Dallas

Master of Science in Bioinformatics and Computational Biology

Richardson, TX

Aug. 2022 - Dec. 2024

Kumaraguru College of Technology

Bachelor of Technology in Biotechnology

Coimbatore, India

Aug. 2018 - May 2022

PROJECTS

NixOS Bioinformatics Environment

- Built containerized environment using NixOS for true binary reproducibility
- Implemented multi-stage builds for efficient dependency management
- Established comprehensive documentation for development and deployment

Regulatory Networks in Plant Stress

- Mapped chromatin interactions in rice under environmental stress conditions
- Integrated Hi-C, ChIP-seq, and RNA-seq data to identify regulatory hubs
- Developed visualization approaches for complex multi-omics networks

EXPERIENCE

Bioinformatician

New York Botanics, LLC

Apr. 2025 - Present

New York, NY

- Applied Bioinformatics and Computational Biology principles to web design and presentation
- Developed and enhanced web tools for data visualization and database management
- Created scientific communication materials to effectively convey complex data insights

Science and Math Tutor

Tutoring Center

Aug. 2023 - Sep. 2024

Plano, TX

- Designed and implemented customized STEM lesson plans for students aged 6-16
- Maintained consistent student achievement with 80%+ grade averages
- Translated complex concepts into age-appropriate explanations

Content Writer & Team Lead

Scrabble Club of Kumaraguru

Sep. 2018 - May 2022

Coimbatore, India

- Managed writing team while contributing content including interviews and essays
- Adapted television content into theatrical format, developing creative solutions
- Curated engaging social media content balancing consistency with innovation

Undergraduate Research Assistant

Kumaraguru College of Technology

Aug. 2021 - May 2022

Coimbatore, India

- Achieved 85% accuracy in PCOS diagnosis with custom coded neural network
- Created in silico docking models for aptamer applications
- Facilitated research accessibility across language barriers

TECHNICAL SKILLS

Programming:	Python, R, SQL, Bash, Docker, NixOS, Git, AWS
Bioinformatics:	NGS analysis (RNA-seq, ChIP-seq, Hi-C), WGCNA, DESeq2, MACS2, BWA
Data Analysis:	Statistical modeling, Survival analysis, Regression, Data visualization

CORE COMPETENCIES

- NGS Data Analysis
- Pipeline Development
- STEM Education
- Multi-omics Integration
- Complex Systems Analysis
- Cross-disciplinary Communication