SHASHANKA PURANIKA

Udupi, Karnataka, India

shashankapuranika747@gmail.com — linkedin.com/in/shashanka-puranika-k

Professional Summary

Passionate and driven postgraduate student at MSLS-MAHE, specializing in biochemistry and microbiology. With a keen interest in exploring the intersection of computational biology, bioinformatics, and programming, I am dedicated to advancing research and innovation in the life sciences. Skilled in Python, PERL, and data analysis, I thrive on solving complex problems and continuously learning new techniques. Inspired by nature's beauty and the pursuit of knowledge, I aim to contribute meaningfully to the scientific community while embracing creativity and curiosity in my journey.

Education

School of Life Sciences, Manipal Aug 2024 – Jul 2026
Master of Science (MSc) in Systems Biology *Udupi, Karnataka, India*

Key Skills: Protein Modelling, Genome Sequencing, PERL, Molecular Biology, Python Programming, Data Analysis, Genome Analysis, Biological Databases, Molecular & Cellular Biology, Shell Scripting, Data Processing, Molecular Docking, Exploratory Data Analysis, Machine Learning, Systems Biology, Computational Biology, Molecular Dynamics Simulations, Analytical Skills, Programming, Bioinformatics, Linux

Bhandarkars' Arts & Science College Nov 2021 – Jul 2024
Bachelor of Science (BS) in Microbiology and Biochemistry *Kundapura, Karnataka, India*

Key Skills: Microbiology, English, Antimicrobial Resistance, Aseptic Technique, Biochemistry, Writing, Problem Solving, Analytical Skills

Viveka Pre-University College Kota May 2019 – Jul 2021
Pre-University Course (PUC) in PCMB *Kota, Karnataka, India*

Grade: Distinction
Key Skills: Internet Access, Mathematics, English, Communication, Physics, Writing, Problem Solving

Experience

School of Life Sciences, Manipal Aug 2024 – Present
Student (Full-time) *Udupi, Karnataka, India*

- Currently pursuing Master of Science in Systems Biology
- Engaged in advanced coursework in computational biology and bioinformatics
- Developing expertise in biological data analysis and molecular simulations

Manipal Institute of Technology Jul 2024 – Aug 2024
Student Intern (Internship) *Manipal, Karnataka, India*

- Worked on a project related to detection of biofilms
- Applied knowledge of microbiology and microfluidics
- Gained hands-on experience in laboratory research techniques

Research Projects

Microbial Fermentation of Raw Coconut Water

Jan 2023 – Present — Associated with Bhandarkars' Arts & Science College

- Research work under the guidance of Prof. Mrs. Suma G R, Head of the Department of Applied Biosciences, and Dr. Poornima T, Lecturer in Biochemistry, of Bhandarkars' College, Kundapura
- Project for IIC of Bhandarkars' College, Kundapura
- Skills applied: Biochemistry, Aseptic Technique

Publications

1. **Distance-based ratio metric assay using thread-based devices for Karaya gum detection in food samples**
   Scientific Reports, September 29, 2025
   Research on developing a low-cost, rapid and portable device employing thread-based microfluidics for detecting Karaya gum adulterant in food samples.

2. **In vitro Therapeutic Activities of Methoxy Chalcones and Triterpenoids from Syzygium samarangense for Bactericidal Interventions**
   Research on therapeutic activities of natural compounds for antibacterial applications.

3. **Influence of pyridyl nitrogen's position and hydrogen bonding interactions on antibacterial activities investigated by in vitro and in silico**
   Scientific Reports, July 30, 2025
   Investigation of pyridine derivatives' antibacterial activities through experimental and computational methods.

Technical Skills

- **Programming Languages:** Python, PERL, Shell Scripting, Linux
- **Bioinformatics:** Genome Sequencing, Genome Analysis, Biological Databases, Protein Modelling, Molecular Docking, Exploratory Data Analysis, Data Processing
- **Computational Biology:** Molecular Dynamics Simulations, Machine Learning, Systems Biology, Data Analysis
- **Laboratory Skills:** Microbiology, Biochemistry, Aseptic Technique, Antimicrobial Resistance, Microfluidics
- **Core Competencies:** Molecular & Cellular Biology, Analytical Skills, Problem Solving, Writing, Communication

Certifications

- Access Bioinformatics Databases with Biopython
- Stanford Introduction to Food and Health
- Command Line Basics in Linux
- Researcher's Guide to RNA Sequencing Data
- Introduction to Genomic Technologies
- Introduction to Good Manufacturing Practices (GMP)
- Current Good Manufacturing Practices

Career Interests

Seeking opportunities in Computational Biologist and Bioinformatician roles where I can apply my expertise in systems biology, bioinformatics, and data analysis to advance research in life sciences and contribute to innovative solutions in biological research.