Sumit Singh Bhandari

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Career Objective

- **A motivated BioTechnology undergraduate** seeking an internship in **Bioinformatics and Computational Biology** to apply my skills in **Statistics and Backend Development**. Eager to gain hands-on experience and contribute to building computational tools that bridge technology and Life Sciences.

Education

- **Graphic Era Deemed to be University** — Dehradun, India
  Bachelor of Technology - Biotechnology; GPA: 8.03 — *2022 - 2026*
  Courses: *Bioinformatics, Statistical Data Analysis using R, Biosensors, Bioanalytical Techniques*
- **GRD Academy** — Niranjanpur, Patelnagar, Dehradun, Uttarakhand, India
  Senior Secondary; Percentage: 69 — *2019*
- **Army Public School** — Almora, Uttarakhand, India
  Secondary; CGPA : 8.7 — *2017*

Skills Summary

- **Programming Languages**: JavaScript, R
- **Scripting and Automation**: Bash
- **Databases**: MongoDB
- **Frameworks**: NodeJS
- **Bioinformatics Tools**: JMOL, EMBOSS Dot Matcher, Modeller, BLAST, Vina
- **Wet Lab Skills**: PCR, UV-Vis Spectroscopy, Gel Electrophoresis, Staining, Thin Layer Chromatography, Microbial Culturing
- **Soft Skills**: Writing, Public Speaking, Time Management
- **Languages**: Hindi (Native), English (Proficient), French (Beginner)

Experience

- **Baunthiyal Path Lab and Imaging Centre Pvt. Ltd.** — On-site
  Research Intern (Internship) — *July 15, 2024 - Aug 31, 2024*
  - Conducted a research on project titled **"Isolation and Identification of Bioplastic Producing Microbes from Environmental Samples."**
  - Performed **serial dilution** and **microbial culturing** to isolate potential bioplastic-producing microbes
  - Utilized **Sudan Black B dye staining** to screen bacteria for **PHB** granules
  - Identified bacterial strains using **Vitek 2 Compact** for biochemical characterization, confirming the presence of *Sphingomonas paucimobilis, Acinetobacter haemolyticus*, known for bioplastic production

Projects

- **Isolation and Purification of Lactic Acid from Agricultural Waste for Poly-Lactic Acid Synthesis**: (Work in progress)
  - To perform **anaerobic fermentation of molasses for lactic acid(monomer)** production.
  - **To purify lactic acid** from fermented product as a pre-requisite for polymerisation.
  - **To carry optimized polymerization of lactic acid for poly-lactic acid production**
- **Synthesis of polymer-based nanocoating for inhibiting contamination in plant growth media**: (Work in progress)
  - **Silver Nanoparticles Synthesis**
  - Characterization of Nanoparticles using **Scanning Electron Spectroscopy** and Atomic Force Microscopy
  - Synthesis of **nanocoating solution** and application on substrate
  - **Anti-microbial efficiency** of Nano-particles using agar well diffusion

Certifications

- **Bioinformatics**: **Learn Bioinformatics From Scratch -** Udemy Course (March '25)

Volunteer Experience

- **Volunteered in Vigyaan**: Volunteered in an event themed **The Art and Wisdom behind Academic Paper Writing.** I was a part of Discipline committee
- **Attended the conference**: Attended a 2 day conference on **"Interdisciplinary Approaches in Life Science for Translational Research"**