Bhavya Sachan

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Academic Qualifications

Year	Degree/Certificate	Institute	CPI/%
2022 - Present	B.Tech	National Institute of Technology, Allahabad	7.8/10
2021	Class XII (CBSE)	UP Kirana Seva Samiti Balika Vidyalaya, Kanpur	90.2%
2019	Class X (CBSE)	UP Kirana Seva Samiti Balika Vidyalaya, Kanpur	93.2%

Achievements

- Accomplished a **top 2 percentile** in the Joint Entrance Examination (JEE) - **Main**, among **1.1 million** candidates *2022*
- Secured **Global Rank 498** among **25,500+** participants in Leetcode Biweekly Contest 155 *2025*
- Secured **Global Rank 12** among **3,000+** participants in Codechef Starters 75 division 4 contest *2024*
- Demonstrated strong problem-solving abilities by solving **900+** DSA problems on **LeetCode** and other platforms *Ongoing*
- Secured **7**[th] position among **300+** participants in a **Graphs contest** conducted by **AlgoUniversity** *2024*
- Achieved **first** place in the **Avishkar Triathlon (Software Domain)** within the ME department *2023*
- Codeforces Rating: **1312 (Pupil)** | LeetCode Rating: **1777** *Ongoing*

Work Experience

Software Development Intern | Innomatics Research Labs *Dec'23 - Jan'24*

Objective	• Executing Node.js & Express.js for seamless integration of JWT and robust data security at Altor Smart Helmet
Approach	• Implemented secure user authentication system using **Node.js**, **Express.js**, and **JSON Web Tokens (JWT)** • Developed user signup and login functionality, integrating **bcrypt** for password hashing and verification • Utilized **Mongoose** to design and enforce user data schema, ensuring impeccable data integrity and validation • Developed **RESTful API** endpoints utilizing Express **Router & middleware**, ensuring secure user interactions
Impact	• Strengthened user data security and experience by implementation of advanced authentication mechanisms

Project

Middle Ear Disease Detection *Jan'23 - Apr'23*

Objective	• Drive the advancement of middle ear disease detection through innovative **computer vision** techniques
Approach	• Researched and applied advanced **feature extraction** methods, encompassing color, shape and texture analysis • Achieved **87%** accuracy through implementation of an ensemble model utilizing **ResNet50** and **InceptionV3** • Efficiently incorporated **LBP** texture features extraction into ensemble model, achieving impressive **93%** accuracy • Implemented a **false mapping technique** for extracting **ROI**, reducing image noise & enhancing model accuracy
Impact	• Spearheaded advancements in **non-invasive diagnosis**, revolutionizing middle ear disease detection methods

Let's Shop : An E-Commerce platform *Dec'24*

Objective	• Develop a **general store website** enabling multi-category online shopping with real-time cart management
Approach	• Utilized **Next.js**, **Node.js**, and **MongoDB** to build a web app supporting efficient client-server interaction • Implemented **NextAuth.js** for secure user authentication via **Google OAuth** and **email verification** • Developed & optimized **RESTful APIs** for **asynchronous** front-end communication & robust backend handling • Implemented user-friendly **Add to Cart** functionality & **real-time message alert** on any update in the cart • Developed **QR code payment** & integrated **discount coupons** functionality , meeting shopkeepers' preferences • Implemented user-friendly **product management** interface for shopkeepers, enhancing workflow efficiency
Impact	• Enhanced **data reliability** and **reduced checkout latency** through optimized **API** and **database design**

Technical Skills

- **Programming Languages and Utilities:** C++, Python, Matlab, JavaScript, HTML, SQL, LATEX, Github
- **Frameworks and Libraries:** MERN, Next.js, Tailwind CSS, Pandas, Matplotlib, NumPy, Mongoose
- **Environment and Databases:** Node.Js, Express.js, MongoDB, PostgreSQL, SolidWorks, AutoCad, ANSYS
- **Areas of Interest:** Web Development, Machine Learning, Deep Learning, Data Analysis, Automobiles

Relevant Coursework

Implies A | +Implies ongoing

CBNST*	Introduction to AI/ML*	Optimization methods in engineering*
Data Structure & Algorithm*	Machine Learning+	Neural Networks*

Positions of Responsibility

- **Mentor | *Robotics Club, NIT Allahabad*** *Aug'23 - Mar'24*
  - Managed the selection process of **20+ people** for various AI/ML software projects
  - Mentored the couple of groups with 15-20 people for projects : **Image Style Transfer** & **AI Music Generator**
  - Conducted regular discussions & meetings to be in sync with the projects and helped in exhibition of the same
- **PR Team | *Culrav-Avishkar, NIT Allahabad*** *Nov'24*
  - Managed communication with **10+ sponsers** and an **5+ alumni** during the 2024 Cultural-Technical Fest for funds
  - Coordinated 1000+ student for activities: interviews, tests, PPTs, GDs, and various other technical events