Bikram Hawladar

Phone No. | Email | Linked in

Education

Indian Institute of Information Technology, Dharwad — Dharwad, Karnataka
Bachelor of Engineering in Computer Science and Technology |CGPA: 8.45/10 — *Aug 2023 – Ongoing*

- **Subjects:** Data Structures and Algorithms, Software Engineering, Computer Network, Statistics, Artificial Intelligence, AI for Biomedical Signal Interpretation.

Burdwan Municipal High School (WBCHSE) — Purba Bardhaman, West Bengal
Higher Secondary (10+2) *Score: 85%* — *Aug 2021 – Aug 2023*

Internships

Research Intern | *NIT Durgapur* — May 2025 – Aug 2025
Under the guidance of Prof. (Mrs) Tandra Pal, CSE department

- EEG ERSP Analysis of Working Memory Load (N-back Task). Designed a deep learning workflow for cognitive workload identification by training CNNs on ERSP spectrogram images from EEG in N-back tasks.
- Automated ERSP visualization and labeling in MATLAB, mapped datasets into PyTorch for workload classification.
- Achieved promising initial results in distinguishing different working memory load levels.

Projects

SoundCo – Engineered a real-time Wi-Fi audio platform using WebRTC
Independent Projects| *Node.Js, React-Native, HTML, CSS, Express.Js* — *Nov 2025 – Ongoing*

- **Real-time Audio Sync:** Using WebRTC with Socket.io, created low-latency, peer-to-peer audio mesh to synchronize multiple Android phones over local Wi-Fi.
- **Architecture:** It allows implementing UDP broadcasting for automatic server discovery. Additionally, the use of Android Foreground Services assures that playback is continuous, even when the device is locked.
- **Cross-platform integration:** It includes developing a Node.js Express web client that allows laptops to stream systems' audio-Spotify and VLC among others-directly to the mobile network.

Sleep Apnea Detection and Prediction System | *Python, PyTorch, Pandas, NumPy*
Under the guidance of Assistant Professor Dr. Sibasankar Padhy, ECE department — *Aug 2025 – Nov 2025*

- Developed a system to detect and predict sleep apnea events using Random Forest with 92% accuracy.
- Used PPG signals from wearable gadgets to enable real-world applicability.
- Designed and trained the model pipeline with Python and PyTorch for real-time inference.

Research on Smartphone Screen Time and Its Impact on Sleep | *Python, PyTorch, Pandas, NumPy*
Under the guidance of Assistant Professor Dr. Sunil C K, CSE department — *Aug 2025 – Nov 2025*

- Examined the impact of smartphone usage and exposure to light on the quality of sleep through.
- Applied sophisticated analytical methods, such as linear regression, and machine learning algorithm like LSTM, to study sleep behavior and forecast outcomes.
- Directed towards filling research gaps by employing objective monitoring and a longitudinal design.

Skills

- **Languages:** Python, C, MySQL, Firebase, Flutter
- **Developer Tools:** VS Code, PyCharm
- **Design Platforms:** Figma, Canva
- **Core Areas:** Machine Learning, Computer Networks, Biomedical Signal Processing, Statistical Models.
- **Other Areas:** Configuring PC Hardware and Software, Content Writing

Hobbies

Guitar Playing, Playing Chess, Reading Books, Video Editing