**Swaraj Saha**

+91-7980860943 | [sahaswaraj0@gmail.com](mailto:rmishra.connect@gmail.com) | linkedin.com/in/swaraj-saha-99326a350

**PROFILE**

A Computer science undergraduate who is driven and meticulous, with a solid background in programming, data structures, algorithms, and machine learning. Enthusiastic about using analytical thinking to solve real-world issues and ready to put academic knowledge to use in real-world situations.

**EDUCATION**

School- Aditya Academy Senior Secondary Barasat,Kolkata

2007 - 2022

Class 10 - 72%

Class 12 - 84%

College- **Kalinga Institute of Industrial and Technology (DU)**  Bhubaneswar, Odisha

**Bachelor of Engineering** in Computer Science 2022 – 2026

CGPA - 6.4 (6th Semester)

* Relevant coursework in [Relevant Subjects: Artificial Intelligence, ML, etc.]

**SKILLS**

**Languages:** C, Java ,Python ,HTML ,CSS ,Javascript

**Technical:** My SQL, Oracle, , Machine Learning

**Tools:** AWS (S3, EC2), Tableau, Excel

**CERTIFICATIONS**

* AWS Academy Graduate in Cloud Architecting – Dec’24 (https://www.credly.com/badges/5e303439-84d7-4df0-8da6-b874beb10b36/print)
* AWS Academy Graduate in Cloud Computing Foundations – Dec’24 (https://www.credly.com/badges/d2c078fe-14ef-425a-bb8a-79881323ee75/print)
* Health Systems Development: Introduction to Health Systems– Nov’24( https://www.coursera.org/account/accomplishments/records/5TRRUJTKGNRP )
* Health Systems Development: Health systems, Policy and Research – Nov’24 (https://www.coursera.org/account/accomplishments/records/8GBL1CGW1A70)

**EXPERIENCE**

**AWS ACADEMY**

Cloud Computing Trainee(self-paced training) Oct 2024 – Dec 2024

* Learned how to create cloud architectures that are secure, scalable, and economical while adhering to AWS best practices.
* Gained hands-on knowledge of AWS core services including EC2, S3, IAM, VPC, and Lambda
* Developed fundamental abilities in infrastructure-as-code, cloud computing, and solution design for practical cloud applications

**Cisco Networking Academy & KiiT University.**  
Self‑Paced & Instructor‑Led Programs | Cybersecurity & Networking Trainee| Mar 2025 – Jun 2025(Present)

* **Ethical Hacker**: Mastered offensive‑security techniques to identify, exploit, and remediate network and application vulnerabilities before they can be weaponized.
* **Introduction to Cybersecurity** (Instructor‑Led): Explored core cybersecurity concepts, threat landscapes, and the fundamentals of protecting digital assets.
* **Cybersecurity Essentials** (Instructor‑Led): Learned defensive strategies, incident‑response workflows, and best practices for safeguarding enterprise environments.
* **Python Essentials 1 & 2** (Instructor‑Led): Built a solid foundation in Python programming—data types, control flows, functions, and libraries—to automate security tasks and data analysis.
* **CCNA 1: Introduction to Networks** (Instructor‑Led): Gained hands‑on experience configuring routers and switches; understanding IP addressing, network protocols, and topology design.
* **CCNA 2: Switching, Routing, and Wireless Essentials**(Instructor‑Led): Deepened skills in VLANs, STP, inter‑VLAN routing, wireless fundamentals, and network troubleshooting.
* **CCNA 3: Enterprise Networking, Security, and Automation**(Instructor‑Led): Implemented advanced network services—MPLS, QoS, VPNs—and used automation tools (e.g., Python, Ansible) to streamline network operations.

**PROJECTS**

**1)Motor Imagery with Game Theory**

* **Objective:** Built a four‑class EEG‑based motor‑imagery Brain‑Computer Interface (BCI) classifier (left hand, right hand, both feet, tongue) by fusing deep learning with game‑theoretic feature attribution.
* **Data Pipeline:** Acquired and preprocessed raw EEG signals using band‑pass filtering (0.5–59 Hz), artifact removal and epoch segmentation.
* **Modeling & Tools:** Designed and trained a convolutional neural network in Python (TensorFlow/PyTorch) to distinguish imagined movement tasks.
* **Game‑Theory Integration:** Employed Shapley Additive Explanations (SHAP) to quantify each EEG feature’s contribution, enhancing interpretability and decision‑making transparency.
* **Evaluation:** Achieved ~75% overall accuracy, balanced precision/recall (0.75–0.78), validated with ROC curves, confusion matrices and loss/accuracy trend analyses to identify and mitigate overfitting.
* **Impact:** Demonstrated a robust, explainable approach to motor‑imagery classification—laying groundwork for more reliable assistive‑technology BCIs.

**2)Smart Attendance System using Face Recognition**  
Developed a real-time face recognition model using OpenCV’s LBPH algorithm for automatic attendance logging. Integrated camera-based input and trained custom face datasets for personalized recognition with 85%+ accuracy.

**Skills:** Python, OpenCV, Machine Learning, Computer Vision, Image Processing