

Suvayu Biswas

Full-Stack Developer | AI/ML | Cloud Certified

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PROFESSIONAL SUMMARY

Oracle and Red Hat certified Computer Science student (**CGPA: 8.98**) with a strong foundation in scalable full-stack development and applied AI/ML. Proven track record in architecting production-ready applications (Ghuumo) and researching medical imaging models (**97.6% accuracy**). Actively seeking **Software Engineering** internship opportunities to leverage expertise in **Java, Node.js, Python**, and Cloud Infrastructure

EDUCATION

Bachelor of Technology (B.Tech) in Computer Science and Engineering, 2023 – 2027
Kalinga Institute of Industrial Technology (KIIT) Odisha, India
CGPA: 8.98 / 10

PROJECTS & RESEARCH

- Ghuumo – Location-Based Travel & Listing Platform**

09/2025 – 12/2025
- GitHub : <https://github.com/SuvayuBiswas/ghuumo>

 - **Full-Stack Architecture:** Developed a scalable web application using **Node.js** and **Express.js**, utilizing **EJS** for server-side templating to ensure fast initial page loads and SEO friendliness.
 - **Geospatial Integration:** Integrated **Leaflet.js** and **OpenStreetMap** to render interactive maps, enabling users to pinpoint travel locations and view dynamic clustering of destinations.
 - **Database & Schema:** Engineered a flexible NoSQL data model using **MongoDB** and **Mongoose**, handling complex relationships between users, campgrounds, and reviews.
 - **Security & Auth:** Implemented robust authentication and session management using **Passport.js**, secured sensitive API keys with **Dotenv**, and sanitized inputs to prevent NoSQL injection.
 - **UI/UX Design:** Built a fully responsive, mobile-first interface using **Bootstrap 5**, ensuring consistent layout and usability across all device sizes.
 - **Tech Stack:** Node.js, Express, MongoDB, Passport.js, Leaflet.js, Bootstrap.
- Cascading Self-Attention Funnel (CSAF) — Brain Tumor Classification Model,**

06/2025 – 11/2025
- Research Project | Paper drafted (unpublished)

 - **Model Innovation:** Architected a novel **lightweight deep learning model** utilizing a cascading self-attention mechanism to prioritize relevant tumor features while suppressing background noise.
 - **Performance Optimization:** Achieved a **97.6% accuracy** and **99.67% recall** on the BRISC2025 dataset, outperforming standard heavy-weight CNN baselines (like ResNet) while using **<67K parameters**.
 - **Resource Efficiency:** Optimized the model for deployment in resource-constrained environments (edge devices) by implementing aggressive **down-sampling** and attention funnels.
 - **Research Output:** Conducted rigorous ablation studies and drafted a research paper (currently in pre-submission) validating the efficacy of low-parameter models in medical imaging.
 - **Tech Stack:** Python, PyTorch, NumPy, CNNs.
- Personal Developer Portfolio**

12/2025 – 12/2025
- GitHub : <https://github.com/SuvayuBiswas/suvayu.me>

 - Designed and deployed a responsive portfolio to showcase projects, research, and skills.

TECHNICAL SKILLS

Programming Languages JavaScript (ES6+), Python, Java, SQL, C	Backend & Database Node.js, Express.js, MongoDB, Mongoose, RESTful APIs
Frontend HTML5, CSS3, Bootstrap, EJS, Responsive Design, DOM Manipulation	Core CS Concepts OOP, API Integration, Responsive Design, Data Validation
AI/ML PyTorch, TensorFlow/Keras, CNNs, Attention Mechanisms, Data Preprocessing	Cloud & DevOps Oracle Cloud (OCI), AWS, Red Hat Enterprise Linux (RHEL), Git, GitHub

CERTIFICATIONS

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| • Oracle Cloud Infrastructure 2025 - Certified Architect Associate | • Oracle Cloud Infrastructure 2025 Certified Generative AI Professional | • AWS Academy Graduate - Cloud Foundations, Amazon Web Services |
| • Red Hat System Administration I (RH124 - RHA) - Ver. 9.3 | • JavaScript Algorithms and Data Structures - freeCodeCamp | • Responsive Web Design - freeCodeCamp |

LANGUAGES

English Professional Proficiency	Hindi, Bengali Native
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