Aranya Kishor Das

aranya170 | aranyakishor01 | https://aranyaportfolio.web.app/ | aranya.akd@gmail.com | +01300919276

Summary

Tech enthusiast with an outstanding academic record, strong problem-solving abilities, and proficiency in comprehending and testing software applications. Seeking opportunities as a full-stack developer and researcher to apply technical skills in innovative projects. Experienced in software development, club leadership, academic assistance, event organization, and team management, with expertise in robotics, databases, and emerging technologies. See More.

Professional Experience

Undergraduate Assistant United International University, Dept. of CSE
2022 – Present

- **Lead Instructor (IoT, Artificial Intelligence & Robotics):** Conducted an intensive training series consisting of **29 sessions** for a cohort of **27 students**, covering IoT, Advanced Robotics, and System Autonomy.
- **Technical Development:** Designed and built **6 comprehensive robotics projects** used as benchmarks for hardware integration, circuit design, and software implementation.
- Contributed to departmental project evaluations, including hardware assessments and robotics club activities.
- Enhanced teaching materials for introductory electrical and hardware courses to improve student engagement.
- **National Impact:** Spearheaded the development of **Bangladesh's first open-source robotics learning repository**, providing a modular curriculum, hands-on labs, and code templates for the national community.

Club President UIU Robotics Club
2025 – Present

- Designed club strategy, operations, and strategic partnerships while mentoring sub-team leads across Software, Hardware, and R&D for national competitions.
- Oversaw budgeting, corporate sponsorships, and large-scale initiatives including CSE Fest and the World Robot Olympiad.

Team Lead UIU Robotics Club
2022 – 2025

- Managed the Software and R&D teams, overseeing development pipelines, resource allocation, and innovation strategies for robotics initiatives.
- Developed and deployed the club's official website, significantly improving online presence, event coordination, and member engagement.
- Served as an Organizer for national events such as - "CSE Fest 2024", the "World Robot Olympiad," managing logistics, recruitment, and technical demonstrations.
- Competed in national robotics hackathons, designing and programming complex robotic systems with embedded technologies.

Technical Lead Crossroads Initiative
2020 – 2022

- Directed a technical team in developing web and mobile solutions for community-driven projects.
- Coordinated cross-functional tasks to ensure the timely integration of JavaScript and Python-based technologies.
- Mentored junior developers on software design best practices, debugging, and efficient version control.

Club Coordinator ISTARC
2016 – 2018

- Coordinated research presentations and technology seminars for a diverse student body.
- Facilitated collaborative projects on emerging technologies, promoting interdisciplinary research and innovation.

Honors and Awards

- **Champion (1st Place), CSE Project Show (Spring '24)** – Secured top honors in Database Management Systems, outperforming 60 competing teams at United International University.
- **Champion (1st Place), DBMS Poster Presentation** – Recognized for excellence in innovative database architecture and data visualization techniques.
- **1st Runner Up, CSE Project Show (Summer '25)** – Achieved 2nd place for System Analysis and Design in a high-stakes competition of 105 teams.
- **Champion, Willes Science Fest 2017** – Honored for Best Mechanical Engineering project demonstration (Mechanical Category).
- **Core Member Recognition, Crossroads Initiative** – Acknowledged for key contributions to organizational development and technical event coordination.

Research Experience

- **RoboNeT: Robotics, Networking, IoT & Data Communication Repository**
  One of the highest Contributors [Repository Link]
  - Established **Bangladesh's first open-source robotics learning repository**, centralizing resources for robotics, networking, and IoT.
  - Developed a standardized framework to empower national researchers and engineers with modular code and data communication protocols.

- **Adaptive Weighted Ensemble Learning for Mixed Waste Classification**
  Researcher
  - Developed an adaptive ensemble deep learning framework that dynamically weights model influence to optimize classification accuracy for complex waste streams.
  - Improved system robustness in identifying recyclables and hazardous materials using prioritized submodel reliability.

- **Identification and Classification of Dark Triad Personality Traits Using Machine Learning**
  Researcher
  - Engineered a machine learning framework for automated detection of Machiavellianism, Narcissism, and Psychopathy through psychometric pattern analysis.

– Implemented behavioral data processing for high-accuracy trait classification in clinical and organizational contexts.

Projects

- **Freelance: Dacca Delights (Restaurant Website)** – Developed the full front-end architecture and contributed to back-end logic for a high-traffic restaurant platform. Website
- **UIU Robotics Club Official Website** – Designed, developed, and currently maintain the club's primary digital hub. Improved member engagement through a responsive interface. Website
- **DirectEdge** – A comprehensive B2B supply chain model connecting general stores, farmers, and warehouses for optimized logistics. GitHub
- **Kairos** – A habit-tracking and productivity system designed to combat procrastination through data-driven personal growth insights. GitHub
- **UIU Health Care Management** – A web-based healthcare portal for university medical services featuring appointment scheduling and admin oversight. GitHub
- **Peer Pie** – A cross-university student collaboration platform developed in Java, enabling students to connect and share academic resources. GitHub
- **Delta Arm (High-Speed Parallel Robot)** – Developed a parallel kinematic robot designed for rapid assembly and precision sorting. Engineered inverse kinematics to synchronize three motors for high-acceleration movements while maintaining end-effector stability and repeatability.
- **SCARA Arm (4-Axis Precision Robot)** – Prototyped a 4-axis SCARA arm using 3D-printed components and Arduino Nano. Implemented kinematic logic to control joint rotations, optimizing smooth trajectory planning for automated pick-and-place tasks.
- **Shuttle Bus Tracker** – An embedded system designed for real-time public transport optimization, featuring queue management and GPS tracking. GitHub
- **Electronic Voting Machine** – Engineered a secure hardware-based voting system to ensure integrity and efficiency in electoral processes.

Seminars & Workshops

- **Seminar on IoT, Advanced Robotics, and Autonomy** United International University
  Explored emerging trends in autonomous systems, sensor integration for IoT, and the future of robotic control frameworks.

Education

- **Bachelor of Science in Computer Science and Engineering**
  United International University, Dhaka, Bangladesh
  2022 – Present
  Cumulative GPA: 3.24
  Achieved A grades in most laboratory courses, demonstrating excellence in hands-on technical application and experimentation.
  Relevant Coursework: Database Management Systems (DBMS), Robotics, Software Engineering, Microcontrollers, Electronics, Aspect-Oriented Programming (AOP), & System Analysis and Design (SAD).

- **Higher Secondary School Certificate (HSC)**
  St. Gregory's High School and College, Dhaka, Bangladesh
  2018 – 2020
  Focused on science stream with emphasis on mathematics and physics.
  Extracurricular Role: Club Co-ordinator, Ideal Science and Technology Aiming Research Council (ISTARC), 2016 – 2018. Organized research initiatives and technology workshops.
- **Secondary School Certificate (SSC)**
  Ideal School and College, Dhaka, Bangladesh
  2011 – 2018
  Graduated with honors in science subjects.
  Leadership Role: Active participant in science clubs, fostering interest in technology and research.

Skills

Programming Languages

Python, R Programming, JavaScript, Java, C, C++ – Gained through laboratory projects in AOP, Microcontrollers, and Software Engineering, enabling efficient code modularization and real-time system implementation.

Web & Mobile Development

React JS, React Native, Flutter, Dart, Tailwind CSS – Applied in building the UIU Robotics Club website, enhancing front-end design and responsive user interfaces.

Technical & Domain Skills

Database Management (SQL, DBMS), Embedded Systems (Microcontrollers, Electronics), Software Testing, System Analysis and Design – Acquired from recognized projects, improving data modeling, hardware-software integration, and requirement elicitation.

Project Management & Event Organization

Developed through leading national events like CSE Fest and World Robot Olympiad, including budgeting, timeline management, and stakeholder coordination.

Team Leadership, Research & Development

Built through the maintenance of software and R&D teams, fostering innovation, mentorship, and agile workflows in robotics contexts.

Problem-Solving & Critical Thinking

Strengthened in laboratory achievements and event planning, supporting analytical debugging and adaptive decision-making.