

AMITASH NANDA

CONTACT INFORMATION	EL-71, Basanti Colony, Rourkela, Odisha, India, 769012 amitashnanda01@gmail.com	+91 7008544204 amitashnanda.github.io
RESEARCH INTERESTS	Embedded Design and Development, Computer Vision, Machine Learning, Optimization(GPU, FPGAs), Robotics and Automation, Edge IoT	
EDUCATION	Bachelor of Technology — Instrumentation and Electronics Engineering (NBA Accredited) College of Engineering and Technology April 2019 <i>Bhubaneswar, India</i> <ul style="list-style-type: none">• Top 5 of the Department with a GPA of 8.61• Awarded CET Merit Scholarship Higher Secondary — Central Board of Secondary Education Deepika English Medium School Summer 2015 <i>Sector-5, Rourkela, India</i> <ul style="list-style-type: none">• Top 10 of the Batch with 90.8%	
RESEARCH EXPERIENCE	Application Developer — Accenture Industry X.0 Dec 2019 to Present Accenture MD&I Innovation Project- 3DXGO <i>Supervisor: Mr. Yogesh. J. Patil, Tech Delivery Associate Manager</i> <ul style="list-style-type: none">• This is the innovation project where resources work on a problem statement leading to design, development and implementation of the product.• Worked on the design and development of a mobile application for 3D Experience platform functionalities. Research Intern — Escorts Group May 2017 to April 2019 Computer Vision Assisted Autonomous Intra-Row Weeder <i>Supervisor: Mr. Nijagun Hiremath, DGM, Escorts Ltd</i> <ul style="list-style-type: none">• Led the hardware team to implement a computer vision assisted model to classify weed and cabbage using Haar Cascade Classifier and wheel encoding principle.• Designed and developed a table-top model to simulate the autonomous weeding process.• Seed funded 2000 USD from Escorts Group to facilitate research. Research Assistant Sept 2018 to April 2019 Plant Sustainability Enhancement Using UAV <i>Supervisor: Dr. Tapas Kumar Patra, Dept. of I&E, CET, Bhubaneswar, Prof. Mihir Narayan Mohanty, Dept. of ECE, ITER, SOA University</i> <ul style="list-style-type: none">• Developed a non-contact, robust and drone based plant sustainability enhancement system for remotely monitoring the plant health and receiving the on-site data.• Worked on automatic image analysis of the plant data for health monitoring and classification.• Granted 250 USD under the guidelines Technical Education Quality Improvement Programme III (TEQIP), A Unit of MHRD, Govt of India for Implementation of World Bank Assisted Projects in Technical Education.	

Research Assistant

Sept 2017 to April 2018

Automated Railway Track Switching Using RF Communication

Supervisor: Dr. Tapas Kumar Patra, Dept. of I&E, CET, Bhubaneswar

- Developed a system to automate the train track switching mechanism using RF and GPS enabled secure communication, to increase the efficiency of current Solid State Interlocking System using AES encryption.

WORK
EXPERIENCE

Accenture Research Lab — Researcher

Sep 2020 to Present

- Research in the field of Robotics, Extended Reality and Artificial Intelligence

Accenture Technology — Associate Software Engineer June 2019 to Sep 2020

- 3D-EXPERIENCE Platform Dassault Systemes, Developer for CATIA, DELMIA

Paras Technologies — Freelancer

May 2018 to June 2018

Supervisor: Harish Kumar, HR Officer

- Designed and Developed the hardware system for the Vending Machine.

Indian Oil and Corporation Ltd, Paradip — Project Intern April 2018 to May 2018
Supervisor: Lavnish Mohapatra, Ass. Manager(Operations- Maintenance & Inspection)

- Enhanced the process of monitoring the pontoons of the floating roof tank.
- Configured a Robot and controlled locally, with real-time video streaming and capturing images.

PUBLICATIONS

1. R. Vedula, **A. Nanda**, et al, "Computer Vision Assisted Autonomous Intra-Row Weeder", *2018 International Conference on Information and Technology(ICIT)*, IEEE, Bhubaneswar, India, 2018, pp.79-84, doi: [10.1109/ICIT.2018.00027](https://doi.org/10.1109/ICIT.2018.00027).
2. Vedula R., **Nanda A.**, Swain K.K., Das S., Mohanty M.N. (2020) Plant Sustainability Monitoring Using Unmanned Aerial Vehicle. In: Kumar A., Paprzycki M., Gunjan V.(eds) ICDSMLA 2019. Lecture Notes in Electrical Engineering, vol 601. Springer, Singapore, doi: [10.1007/978-981-15-1420-3_128](https://doi.org/10.1007/978-981-15-1420-3_128).
3. **A. Nanda**, K. K. Swain, K. S. Reddy and R. Agarwal, "sTransporter: An Autonomous Robotics System for Collecting Fresh Fruit Crates for the betterment of the Post Harvest Handling Process," *2020 6th International Conference on Advanced Computing and Communication Systems (ICACCS)*, IEEE, Coimbatore, India, 2020, pp. 577-582, doi: [10.1109/ICACCS48705.2020.9074439](https://doi.org/10.1109/ICACCS48705.2020.9074439).
4. **A. Nanda**, K. K. Swain, K. S. Reddy, "Real-Time Internal Inspection of pontoons of Floating Roof Tank using a Mobile Robot", *International Journal of Advanced Research in Computer Engineering & Technology(IJAR CET)*, 2019, pp. 158-161, Volume-8, Issue-5.

SUBMITTED
JOURNAL
PUBLICATIONS

1. **A. Nanda**, A. Mohanty, K. K. Swain, T. K. Patra, "sRailer: A Secure Automated Railway Track Switching System towards Smart Transportation", *Transactions on Intelligent Transportation Systems, IEEE*. [Under Review]

MANUSCRIPTS IN
PREPARATION

1. **A. Nanda**, K. K. Swain, T. K. Patra, M. N. Mohanty "Sustainable Enhancement of Saplings based on Deep Learning Techniques and Internet of Things "

AWARDS	<p>ICACCS, IEEE, Coimbatore March 2020</p> <ul style="list-style-type: none"> • Best Research Paper <p>Major Thesis Dept of Instrumentation & Electronics March 2019</p> <ul style="list-style-type: none"> • Best Thesis Award <p>ISTE Technical Symposium CET Bhubaneswar Chapter March 2018</p> <ul style="list-style-type: none"> • Best paper award among 40 papers from participants from colleges all over the state. • Received a cash prize of 125 USD. <p>Robotics Camp by Infosys August 2018</p> <ul style="list-style-type: none"> • Winner among 30 teams all over Odisha and received certificate of appreciation and trophy. <p>Accenture Innovation Challenge October 2018</p> <ul style="list-style-type: none"> • Finalist among Twenty Thousand proposal all over India. <p>IICDC, Texas Innovation Challenge 2017-2018</p> <ul style="list-style-type: none"> • Quarter Finalist, Top 500 over 5000 teams applied. <p>E-Yantra Robotics Competition, IIT Bombay 2017-2018</p> <ul style="list-style-type: none"> • Semifinalist, Top 100 over 3000 teams applied.
UNIVERSITY SERVICE	<p>Technical Convenor— Zairza Technical Society May 2018 - April 2019</p> <ul style="list-style-type: none"> • Assisted with planning of technical events, competitions and conferences in the college and organize Perception, Annual Techno-Management fest of the college. • Improved industrial collaborations with the technical clubs of the college.
COMMUNITY SERVICE	<p>Volunteer — Google Developer Group, Bhubaneswar Sep 2016 - Present</p> <ul style="list-style-type: none"> • Organized workshops and Study Jam in the field of web-development, basics of machine learning for the students of different colleges in the state. <p>Volunteer — Microsoft Developers Community, Bhubaneswar Sept 2016 - Present</p> <ul style="list-style-type: none"> • Attended various bootcamps (Azure bootcamp), volunteered IoT (Internet of things) workshops and attended community seminars on Embedded System and Machine Learning.
PROJECTS	<p>3DXGO— A mobile application for 3D Experience platform functionalities.</p> <ul style="list-style-type: none"> • Worked on Customization and Integration using RESTful Web-services and Hybrid APP Development using Apache Cordova. <p>Bedrock— Automation Tool for 3D Experience applications</p> <ul style="list-style-type: none"> • Worked on Automation of the end to end User Stories of Airbus PPR Scenario using Image-based and Text-based recognition.
SKILLS AND COMMUNICATION	<p>Technical Skills</p> <ul style="list-style-type: none"> • Languages: <i>C++, Java, Python3, Matlab, Verilog HDL, HTML, CSS, JavaScript</i> • Work Tools, OS, Frameworks and Simulators: <i>Tensorflow, MQTT, L^AT_EX, Excel, Git, V-REP, Multisim, Proteus, ROS, Blender 2.7 3D, Ubuntu Gnome 18.04</i> • Hardware: <i>Arduino, NodeMcu, ARM, AVR, Raspberry Pi, Jetson TK1, Beagle Bone</i> <p>Communication Skills</p> <ul style="list-style-type: none"> • Proficient in English, Hindi and Odia (Native).
RELEVANT COURSES	<p>IOT(<i>Coursera, California University</i>), Python(<i>Udemy</i>), Embedded System(<i>EDX, UT Austin</i>), Robotics Software Development(<i>Udacity</i>), Machine Learning(<i>Udacity, Nanodegree</i>)</p>