JERRIN BRIGHT

LINKEDIN | PORTFOLIO | GITHUB | MAIL | SCHOLAR | NGO | BLOGS

PERSONAL PROFILE STATEMENT

I am a versatile and self-motivated engineer highly skilled in **Autonomous Systems** and **Robotic Real-time Perception** for aerial and ground robots. I aim to work on research-oriented organizations that utilize and contribute in honing my skills.

QUALIFICATIONS

Vellore Institute of Technology, Chennai, India *June 2018-April 2022 (expected)*
Bachelors of Technology in Mechanical Engineering *Cumulative GPA: 8.25/10.0*

AREA OF EXPERTISE

Design and Simulation Tools	Gazebo, RViz, MATLAB, SOFA, Fusion360, SolidWorks, Proteus
Programming Tools	Python, C++, Embedded System, Shell, HTML, CSS, JS, PHP
Other Tools	ROS, Git, MoveIt, OpenCV, TensorFlow, PyTorch, PCL, Heroku

PROFESSIONAL EXPERIENCE

Globalink Research Intern @ McMaster University, Ontario, Canada *Starting July 2021*
Designing and testing software for controlling a pneumatically-powered soft robot arm. It will acquire real-time data from several sensors, and implement a suitable controller (e.g., model predictive control). (**Supervised by Prof. Gary Bone)**

Summer Research Intern @ Arizona State University, Phoenix, USA *Starting May 2021*
Using laser scanning, photogrammetry to digitalize environments via visualizing data collected from sensors fusing into a unified system. It will be processed to provide insights to builders, stewards. (**Supervised by Prof. Thomas Czerniawski)**

Autonomous System Developer (ASD) - Intern @ Aero2Astro, India *Oct 2020-Present*
Developing ROS based autonomous navigation firmware using Visual Inertial SLAM concepts for indoor environment. Implementation was based on Sensor Fusion (EKF) and is aimed to eradicate GPS thus making the firmware more reliable.

Project Research Intern @ Yuan Ze University, Taoyuan City, Taiwan *April – June 2020*
Built a robust smart parking system using semantic segmentation with Conv. Conditional Random Fields and Atrous Convolution enhancing the visual capability of the system. (**Supervised by Prof. Wei-Tyng Hong)**

Team Captain and Co-Founder @ Atom Robotics, VIT Chennai, India *Jan 2019-Present*
An Intelligent Robotics & Satellite exploration team consisting of 50+ aspiring young minds. The team focuses on Intelligent ground vehicles targeting IGVC, USA; Planetary Aerial System targeting IPAS, MSSA; Satellites targeting Can-Sat, USA.

RESEARCH AND PUBLICATIONS

Jerrin Bright et al 2021 IOP Conf. Ser.: Mater. Sci. Eng. 1012 012019
Optimization of quadcopter frame using generative design and comparison with DJI F450 drone frame

Jerrin Bright et al (Currently in Progress)
A Novel Dynamic Obstacle Avoidance Approach using Panoptic Segmentation and Optical Flow techniques

RESEARCH PROJECT

3D Pose Estimation using Stereo Visual Odometry *Feb – April 2021*
Techniques: SLAM, FLANN, ORB, PnP, RANSAC, KLT Optical Flow

Autonomous MAV enhanced with door-to-door delivery topographies *Dec – Jan 2020*
Techniques: ROS, PID Control, Gazebo, RViz, Navigation, AMCL, Path Planning

SLAM embedded AGV for autonomous navigation *Sep – Oct 2020*
Techniques: SLAM, ROS, Kinect + IMU, Sensor Fusion, Gazebo, RViz, Mapping, Path Planning

Intelligent Visual Robotic Inspection system for fault detection *Jan – Feb 2021*
Techniques: LBPH, Deep Learning, Fused Networks, Attention embedded Residual Network

Vestium- Smart Robotic Closet *May – Oct 2020*
Techniques: Designing and Simulation, IOT, Encoders, Raspberry Pi, Communication

ACCOLADES AND RECOGNITION

Outstanding Research Paper Award	RIACT 2020 International Conference
Recognized Galactic Problem Solver	NASA International Space Challenge
Second Runner-up, IEEE Hackathon	Apogee'21, BITS Pilani Campus

EXTRA-CURRICULAR

Machine Learning Contributor Contributing ML blogs to various blog-based companies. Have published 13 blogs.
Madras Scientific Research Foundation, NGO Spreading awareness on robotics in schools, amongst unprivileged kids
National Service Scheme Active Member of Indian Government sponsored public service program.
Institute of Electrical and Electronics Engineer Active Member of Robotics and Automation Society (RAS).