JERRIN BRIGHT

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PERSONAL PROFILE STATEMENT

I want to take up an exacting position in the industry, where I could work on R&D and traverse new paths in Intelligent Robotics. Bearing these long-term goals in mind, my immediate objective is to work on several prominent research activities that would boost my profile and my skills, whose importance in laying a strong foundation for a successful career in research is paramount.

CORE INTEREST

- Robotics
- Artificial Intelligence
- CAD & Simulations
- Autonomous System Development
- Front-End Website Developing
- Technical Management

QUALIFICATIONS

Vellore Institute of Technology, Chennai, India *June 2018-Present*
Bachelors of Technology in Mechanical Engineering *Cumulative GPA: 8.26/10.0*
Chettinad Vidyashram, Chennai, India *June 2003-May 2018*
CBSE – Computer Science *10^{th} CGPA 9.4/10.0, 12^{th} 83.2%*

PROFESSIONAL EXPERIENCE

Research Intern - Autonomous System Developer @ Aero2Astro *Oct 2020-Present*
- Developing a firmware for navigation using ROS and SLAM concepts.
- Once implemented, will resolve GPS reception glitches observed in drones.

Operation Manager Intern @ Madras Scientific Research Foundation *Oct - Dec 2020*
- Working on cutting edge researches based on Additive Manufacturing.
- Detecting of defects and Reinforcement for 3D printer models.
- Software/ Concepts like Rhinoceros, KMeans Clustering, GCN, visualization and manipulation of big datasets, OpenCv, TensorFlow were used.

Data Science Intern @ BrainMagic InfoTech Pvt, India *May – July 2020*
- Automobile part recognition via transfer learning and data augmentation techniques.
- Deployed via AWS using Amazon Sagemaker and S3 Buckets.

Project Research Intern @ Yuan Ze University, Taiwan *April – June 2020*
- Conditional Random Fields for Semantic Segmentations via masking and gaussian filters.
- Acoustic Event Detection for 3D localization modeled by Markov models.

ATOM Robotics @ VIT University, Chennai *Jan 2019-Present*
- An official team at VIT University consisting of 55 passionate engineers
- A platform for young aspiring minds to prosper in Robotics, with 20+ awards till date.

AREA OF EXPERTISE

Designing Tools- Autodesk Fusion360, SolidWorks, Simulations, Proteus, Rhinoceros, Cura
Programming Tools- C, C++, Python, Embedded System, Matlab, Shell, HTML_CSS+JS
Machine Learning Tools- OpenCv, TensorFlow, Matplotlib, NumPy, Keras, PyTorch, Scikit
Hardware- Arduino, Raspberry Pi, Drones, ESP, STM, IMU
Operating Systems- Windows, Linux, ROS

RESEARCH AND PUBLICATIONS

Jerrin Bright, R Suryaprakash, S Akash, A Giridharan (2020) Optimization of a quadcopter frame using generative design and comparison with DJI F450 drone frame.
RIACT International Conference *Oct 2020*

- A research accentuating on drone frame designing using Generative designing (GD).
- Designed and Simulated a drone frame using GD in Autodesk Fusion360 software.
- Comparison with DJI and our GD frame was studied and analyzed.

ACCOLADES

Outstanding Research Paper Award – RIACT 2020 International Conference
Winner of CURRENTS'20, NIT Trichy - Autonomous Line Follower by ECE department
Winner of KURUKSHETRA'20, CEG Anna University – RoboZest, national level Techfest
Recognized **Galactic Problem Solver** - NASA International Space Challenge
First Runner-up- Chennai International Youth Fest - Youth Development Consortium
Fourth Runner-up of ATMOS'19 - BITS Pilani, Law follower, Tech-Management Fest
Winner of VASHISTH'19 - IIITDM Kanchipuram, National level Techfest.

RESEARCH PROJECT

VESTIUM- Smart Robotic Closet- Startup Project *May 2020 - Present*

- Designed to maximize small spaces which will be poised to transform urban living.
- Used as an entertainment center, home office, bedroom, storage - all in one closet.
- At present in prototyping phase, with an optimism to make it a startup product.

ASCR- Autonomous Stair Climbing Robot *April – June 2020*

- ASCR was intended to automatically deliver packages from one place to another.
- Linear actuators, gyroscope where used to uphold the position of the package.
- Path detection has been achieved using Computer Vision and ROS.

XRAY Detection *Sep – Dec 2020*

- Built a deep learning model, detecting 14 different chest related diseases.
- Dataset accrued from NIH, consisting of more than one lakh imageries.
- Was trained with the help of MobileNet pre-trained model and data augmentation.

Autonomous Mobile Robot *Sep – Nov 2020*

- Custom built a differential-drive robot and created URDF files along with the world.
- Implemented SLAM techniques with EKF filter and navigation with AMCL.

EXTRA-CURRICULAR

Machine Learning Contributor *Oct – Dec 2020*

- Contributing ML blogs via CodeSpeedy Tech to various blog-based companies.

RoboPrix 2020 *2020*

- Student Coordinator – National Level Robotics Competition.

Institute of Electrical and Electronics Engineer *April 2019 - Present*

- Active Member of Robotics and Society.

National Service Scheme *May 2019 - Present*

- Active Member of Indian Government sponsored public service program.
- Part of several awareness programs – International Coastal Cleanup day, ICG Ship Visit.