SHASHANK KUMAR

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Linkedin · Github · ResearchGate · GoogleScholar

EDUCATION

B.M.S College of Engineering, Bangalore *August 2018-Present*
Bachelor of Engineering in **Computer Science & Engineering** *GPA 8/10*
Affiliated to Visvesvaraya Technological University (VTU)

SKILLS

Programming Languages: Python, C , C++ , Java , JavaScript , MATLAB
Hardware: System Verilog, Embedded C , Assembly , LTspice
Technologies/Frameworks: ROS, OpenCV , Android Studio , scikit-learn , Tensorflow , PyTorch
Databases: MySQL , Oracle Database , MongoDB
Operating Systems: Android , Linux , iOS

PUBLICATIONS / CONFERENCE

[J1] Shashank Kumar,"A mechanism to overcome the toppling problem of a hexapod", International Journal of Intelligent Robotics & Applications (2020) **(Springer)** *[Link to paper]*

RESEARCH EXPERIENCE

Indian Institute of Science (IISc), Bangalore July 2020 - Present
Guide: Dr. Pradipta Biswas, Assistant Professor, Centre for Product Design & Manufacturing (CPDM)

•Performing research on topics of Human Computer Interaction.

Nokia Research & Development Centre, Bangalore March 2020 - Present
Guide: Mr. Rajat Duggal, Senior R & D Engineer

• Proposed a low-cost based multi terrain adaptive array antenna design. Implemented a genetic algorithm on the smart array antenna to improve its efficiency and improved the design of the existing antenna.

B.M.S College of Engineering, Bangalore January 2020 - March 2020
Guide: Prof. Antara Roy Chaudhary, Assistant Professor, Department of Computer Science & Engineering

• Performed a review of all the sorting algorithms available and compared the performance of each with exiting methods.

Defence Research & Development Organisation (DRDO), Bangalore July 2019 - August 2019
Guide: Dr. Nitin Dhiman, Scientist 'C', Centre for Artificial Intelligence & Robotics (CAIR)

• Integrated 3 sensors on a scout robot using ROS and Gazebo. Devised a mechanism to overcome the toppling problem of a hexapod and got it published as my first publication.

SELF-UNDERTAKEN PROJECTS

Autonomous path traversal robot: ***[Link]*** *OpenCV & Python*

• Path detection , navigation , motor control, shape and Colour detection on Raspberry Pi3.

Loan predictor: ***[Link]*** *Python & Logistic regression*

• Predicts who gets loan and who doesn't based on various financial factors.

Wikipedia Search Engine: ***[Link]*** *HTML, CSS & Javascript*

• A search engine that pulls data from Wikipedia. And if you don't have anything in your mind to search for, you can press the Random Article button.

Face recognition & security: ***[Link]*** *OpenCV & Python*

• Protect the Computer against strangers. If scammers want to log in to the computer, ring the phone and lock the computer screen automatically.

Weather App ***[Link]*** *HTML, CSS & Javascript.*

• Created an API to display real time weather data from a darksky website.

RELEVANT COURSEWORK

AlgorithmsData Structures Linear Algebra
Operating SystemsComputer Architecture Discrete Maths & Statistics
Database Management SystemsMicroprocessors and Microcontrollers Theoretical Computations

EXTRACURRICULAR ACTIVITIES

Volunteering & Organisational Experience:

• **Organised** a Hackathon event organised by Protocol tech team at college & Rotatact's Youth parliament.
• **Awarded an 'A'** Certificate in the National Cadets Corps training & supervised an obstacle training course for new recruits.
• Visited an old age home as a student member of the Rotaract club & participated in Green commute & Plog run to promote environmental activism.

Sports Activities:

•**Won a Silver medal** in the Regional level Boxing tournament held in Chennai & represented BMS College of Engineering at Intercollegiate sports tournament in Boxing.