Ahan Kamal Dalia

+1 (667) 464 1581 | adalia1@jh.edu | LinkedIn

EDUCATION

Johns Hopkins University, Whiting School of Engineering, Baltimore, MD
- **Master of Science** degree in **Robotics – Perception and Cognitive Systems** Track   Expected May 2024
- Relevant Coursework: Haptic Interface Design for Human-Robot Interaction, Computer Vision, Human-Robot Interaction, Algorithms for Sensor-Based Robotics, Planning and Managing Projects, Product Management

Dwarkadas J. Sanghvi College of Engineering, University of Mumbai, India   June 2022
- **Bachelor of Engineering in Computer Engineering** with *Distinction* (GPA 9.32/10)
- **DJSCE IBM Advance Technology Course Specialization in Internet of Things** certification, prescribed by IBM ICE

TECHNICAL SKILLS

- **Programming languages:** C/C++, Python, Embedded C, MATLAB
- **Software:** Robot Operating System (ROS), Arduino, Anaconda (Jupyter Lab), AWS, MBed OS, Cisco Packet Tracer
- **Technologies:** Robotics, Internet of Things, Software Engineering, Embedded Technology, Embedded Systems, Automation, Firmware Engineering, Sensor Technology, Sensor Instrumentation, Wireless Communication and Sensor Networks, Computer Vision, Machine Learning, Control Systems, Basic Electronics, PCB Designing, Medical Devices Development, Haptics System Control, Haptics User Interface Development

PROFESSIONAL EXPERIENCE

Aneuvo, Los Angeles, USA | *Firmware Engineering Intern*   June 2023 – August 2023
- Worked on Sensor Technology and Instrumentation (Accelerometer and Gyroscope) for a medical device
- Coded for BLE Methods to reduce the medical device's power consumption by 20% for effective battery life and data transfer along with communication when it can't be physically accessed
- Worked on BLE Reconnection issues for another medical device developed by the company

Eduprime Technologies Pvt. Ltd., Mumbai, India | *Research and Development Intern*   Jan 2021 – July 2021
- Interfaced actuators such as stepper motors, servo motors, DC motors with multiple sensors, and involving various communication devices
- Tested a 3-servo motor coupled Robotic Arm in various configurations

ACADEMIC AND RESEARCH EXPERIENCE

Haptics And Medical Robotics (HAMR) Laboratory, Johns Hopkins University   January 2024 - Present
- Developing a smart prostheses based system for calibrating and assisting users in real-time
- Focusing work as an independent research to construct a demonstration to show efficiency of the system
- Laying the groundwork for further research and development of the required architecture and system

Teaching Assistant for **Mechatronics (EN.530.421), Johns Hopkins University**   Spring 2024
- Assisting the professor in managing and planning for the course, with grading and determining assignments
- Doing the background work for systems to be used further into the course, primarily for the final project

ACADEMIC PROJECTS AND PUBLICATIONS

Demo Presentation and Work-in-Progress Paper   April 2024
- A. Pimpalkar, P. Ameta, **A.K. Dalia**, J.D. Brown, "Pneumatic Arrays for High Frequency Vibrotactile Feedback", IEEE Haptics Symposium 2024

Pneumatic Arrays for High Frequency Vibrotactile Feedback | Arduino, Pneumatic Actuation   Fall 2023
- Created a pneumatic actuation based Haptic Sleeve that uses solenoids and motors to vibrate 3D printed soft silicon cells to provide vibrotactile feedback for the user
- Built code required for choosing different modes of actuation and deciding the pattern of vibration

Social Robotics Project | TIAGo Robot, ROS, Python, Computer Vision, Voice Automation   Spring 2023
- Developed a social robotics project for a pick-and-place task controlled by voice automation
- Executed the coding for the pick-and-place task using computer vision (AR Tags) to detect the requested object and using the robot arms to get the object from a table to the user

DJS Robocon   August 2019 – December 2021
- Vice-Captain of the team, oversaw the working of departments of coding, electronics and marketing
- Implemented highly efficient algorithm, logical solutions, and optimised code for autonomous and manual robots used in the DD National Robocon 2020 and 2021 competitions using C/C++ concepts with OOPM and embedded technology
- Ranked 2nd in Mumbai amongst 15 teams in DD Robocon 2021

LEADERSHIP AND POSITIONS OF RESPONSIBILITIES

- **American Red Cross Certified Lifeguard** at JHU Swimming Pool (Dec 2023- Present)
- **WISE** Program **Student Lead** for Center for Educational Outreach, JHU (Spring 2024)
- Baltimore Robotics Mentorship **Student Lead** at Center for Educational Outreach, JHU (Fall 2023)