Ashvin Anilkumar

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Education

Government Engineering College, Barton Hill, Trivandrum, Bachelor of Technology in Electrical and Electronics Engineering
Aug 2019 – July 2023

- GPA: 8.9/10 (First class with distinction)
- **Additional Coursework:** Minor in Information Technology

Work Experience

Engineer, Backend Development(AI/ML), Qburst Technologies - Trivandrum
Aug 2023 – Present

- **United Nations Women Transparency Portal (Beta)** – Developed an AI search bar to efficiently retrieve information about UN Women.
- Utilized natural language-to-SQL conversion with large language models, which excelled in handling queries with specific, correct answers but faced challenges in summarizing broader topics.
- Developed a novel approach to enhance text summarization capabilities by integrating a RAG pipeline to improve the accuracy of arithmetic operations performed by large language models.
- Increased the accuracy of search results by **90%** and expanded the range of questions it can handle by **85%**.

Academic Projects

Attitude Determination & Control of CubeSat using Triple Axis Magnetorquer
July 2022 – May 2023

- Fabricated and designed testbeds such as the Triple axis Helmholtz coil and Spherical Air Bearing for performing experiments to test the subsystem.
- Designed the triple axis magnetorquers and developed a control system for independent maneuvering of the magnetic field intensity of each magnetorquer.
- Built an effective detumbling mechanism and an attitude maneuver with an accuracy of **9 degrees** and recognized as the best project of our batch.
- Tools Used: Embedded C, Python, STM32, Arduino, Raspberry Pi, KiCad, Texas Instruments Virtual Bench.

Open Source Contributions

Langchain
August 2024

Resolved bug fix in AzureMLEndpointClient class of Langchain by updating the API endpoint structure.

Dataherald
June 2024

Provided clarity on which deployed model was used for generating text embeddings by assigning a dedicated environment variable.

Leadership Positions

Records Manager of Gecb Student Satellite Program(GSSP): Conducted a 21-day internship for junior students focused on designing and fabricating magnetorquers and sensor calibration for CubeSat projects.

Publicity Manager of IEEE: Implemented strategies to enhance the outreach of event posters and accelerate student participation in IEEE programs.

Chairperson of Photography Club: Led the photography club of the college. Developed strategies to streamline preparation and ensure easy access to the photo gallery for all students. Increased the reach of the club by **294%**

Skills and Extra Curricular

Languages: Python, Embedded C, JavaScript, Java

Tools: Raspberry Pi, STM32, Arduino, KiCad, Langchain, Postgres, Texas Instruments Virtual Bench

Extracurriculars: Music, Weightlifting, Photography, Badminton.