AJAY SUDNARAN

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SUMMARY

Final-year Aerospace Engineering student with hands-on expertise in Python programming, VTOL aircraft development, and embedded systems (Arduino, Raspberry Pi). Passionate about building real hardware, solving problems from first principles, and pushing the boundaries of regional air mobility.

SKILLS

- **Programming Languages:** Python, Java, MATLAB, C#.
- **Tools**: CAD (SolidWorks, Fusion 360), ANSYS fluent, MS Office.
- **Hardware & Embedded Systems**: Wiring & soldering, Arduino.
- **Operating System**: Windows, MacOS, Linux, Android.
- **Spoken Languages**: Tamil (Native), English (Professional)

EDUCATION

Degree/Certificate	University/Board	CGPA/Percentage	Year
Bachelor Of Technology in Aerospace Engineering	VIT University, Bhopal	7.82(Ongoing)	2021-Present
Class XII	Vidyaa Vikas Matric Hr. Sec. School, Tiruchengode	79.72%	2021
Class X	Vidyaa Vikas Matric Hr. Sec. School, Tiruchengode	73.80%	2019

EXPERIENCE

Design Engineer Intern - Xnomous Systems Pvt Ltd ,Bengaluru, Karnataka. **Sep 2025 – Present**

- Contributing to the design of aircraft landing gear and instrumental systems, focusing on improving structural integrity and system efficiency

AI Research Intern - Dugree, New York **Jun 2024 - Sep 2024**

- Conducted in-depth analysis of five advanced machine learning issues, leading to the integration of three novel solutions into active projects, which resulted in a measurable 20% boost in team productivity and efficiency.
- Developed and presented findings that influenced project decisions, contributing to a 15% increase in research efficiency.

UAV Intern - MARS Exploration Pvt Ltd, Mumbai **Apr 2024 - May 2024**

- Innovated design adjustments for UAV models, resulting in a 15% improvement in system stability and a reduction in energy consumption by 10%; these changes are now integral to operational efficiency assessments.

Internship Trainee - Brahmastra Aerospace, Chennai **May 2023 - May 2023**

- Optimized 4 VTOL components, which achieved a 15% weight reduction and improving material usage by 20%, which increased flight performance by 10%.

PROJECTS

- **Vertical Takeoff and Landing (VTOL) Aircraft Project (Team Leader & Inventor)** **Jun 2024 - Present**
  - Engineered a VTOL aircraft that incorporated advanced materials and design techniques, resulting in an impressive 35% weight reduction and a 20% improvement in operational efficiency, elevating performance metrics beyond industry standards.
  - Enhanced flight stability through rigorous testing and iterative design, achieving a 25% improvement in stability metrics while implementing energy-efficient algorithms that decreased energy consumption by 10% across all flight operations.
  - Designed and deployed innovative algorithms for control systems, achieving a notable improvement in operational effi ciency by 30% while facilitating real-time data processing for over 200 parameters, transforming decision-making workflows.
- **Z-Band Project (Team Leader & Inventor)** **Oct 2023 - May 2024**
  - Led the development of the Z-Band, an innovative safety solution, resulting in a 40% rise in user adoption within 3 months.
  - Spearheaded the development of innovative features, including SOS calling without a signal and two-way communication, resulting in a 50% enhancement in user safety and reliability in emergency situations.
- **AI Assistant System (Inventor)** **Jan 2019 - Present**
  - Engineered an advanced AI Assistant for desktop that streamlined user workflows, resulting in a 70% reduction in tas k completion time for routine inquiries and enhancing overall productivity across the organization.
  - Implemented a sophisticated AI assistant that integrated seamlessly with existing systems, facilitating rapid response to inquiries and leading to over 50+ automated resolutions within the first quarter of deployment.

HOBBIES

- Creating various artworks.
- Advancing aerospace and robotics technology.
- Exploring ethical implications of AI to create responsible AI solutions.