Hello! from AgniKul.

Who are we?
AgniKul Cosmos Private Limited focuses on design, development and launching of all aspects of rocket launch vehicle technology. We are working on creating a small orbital class launch vehicle that will be designed in India.
("AgniKul" is inspired by the sanskrit word "Gurukul". Translates to: "a place where we learn to use fire")

The company was founded with the sole idea of making space access affordable for everyone. Getting to space shouldn't be the hardest part about being space-faring. We would like to do our part in bringing space access to the common man. We strongly believe that making space access extremely cheap will open up currently unexplored paths in fields that are not even remotely linked to space today.

Advisors: We are both, very proud and thoroughly humbled to have an extremely accomplished set of advisors spread across senior scientists from ISRO, IIT-Madras, the Indian Govt. and even our customer base (i.e.. Cubesat developers) helping us accomplish this mission.

What do we offer?
We are not here to just give grunt work to interns and employees. (non AI) Computer programs do that really well. Our people will be working either directly help us shape the design of the rocket, or work with us on carving out the business strategy, or build an operations framework for an international supply/chain problem in rocket manufacturing.

Eligibility
We strongly prefer working with interns and employees who are passionate about aerospace and willing to work with us for long term

Communications engineer
If you have wondered what is the frequency of brain waves - this is for you
If you confuse multitasking with time division multiplexing - this is for you
If you know why UV can be used for stealth communication in LEO - this is for you

Responsibilities:

- Designs communications systems including fiber optic cable plant, operational voice, wireless voice, video and RF systems.
- Provides support in the assessment, specification development and testing of radio frequency systems architecture, components, circuits, or products. This includes antenna specification of reflector and array systems, transmitters and receivers, etc.

- Analyzes RF radiation, emission patterns, & trajectories to maximize link budget & meet regulatory requirements in UHF, L-Band, C-Band, & S-Band communication systems.
- Performs trade studies to define communication system requirements and optimizations.
- Assists with proposals and specification development related to Launch Site facility-to-range and Launch Vehicle-to-ground communication systems.
- Performs analysis, engineering, and installation for telemetry antennas.

Basic Qualifications:

- Bachelor's Degree in Electronics & Communications engineering
- Knowledge of voice and video communications systems coding protocols
- Ability to understand end to end communications system design
- Establish communication data capacity modeling strategies.
- Ability to define payload analog to digital interfaces.
- Understanding of the inner workings of a communications system digital processor.
- Near expert level capabilities in Excel and MatLab

Preferred Skills and Experience:

- Masters degree in Electronics & Communications engineering
- Prior End to End Communications System Architecture development experience
- Prior experience performing communications system capacity analysis and optimization.
- At least 2 years of project or industry experience with RF, controls, and communications systems and one or more of the following areas: capabilities-based analysis, system architecture development, requirements analysis and traceability, analysis of alternatives, interoperability, risk management, modeling & simulation, test & evaluation, or test planning and management
- Experience with S-Band C-Band and L-Band amplifier specification and testing
- Knowledge of C++, Python, and Labview
- Experience with serial data communications systems -- TCP/IP, EIA 530, and PCM/FM

Additional Requirements:

- Must be available to work extended hours and weekends as needed

What you could take away?

- Your work will directly impact the company's (and the rocket's) trajectory
- You will learn rocket science from some of the most senior and respected minds in ISRO
- You will work on shaping space policy in India
- You will dirty your hands in a global supply/chain optimization problem

Location

- Chennai, India
- Remote working can be considered on a case-by-case basis

Employment Type

- Internship
- Part Time
- Full Time
- PhD Programs

In conclusion

A rocket, like anything else, is just the outcome of the right group of individuals coming together and working towards a common vision. We deeply value people we work with and are looking to collaborate with some of the best minds in the country to bring space closer to earth.

Pls. send us a three line email about yourself and a resume to : humancapital@agnikul.in if you are interested.