SPANTRIK

CAPITAL-EFFICIENT REUSABLE ROCKETS

THE BOTTLENECK IN LAUNCH INDUSTRY

Launch remains expensive and slow

Long wait times for dedicated missions

Rideshare limits orbit and schedule control

Demand is growing faster than launch availability

RAVEN

RAPID | REUSABLE | MODULAR

$0.3 MILLION FOR 100KG
(10X-30X SAVINGS)

LAUNCH WITHIN 3 MONTHS
(INSTEAD OF 12-24 MONTHS)

DIRECT ORBITAL INSERTION
NO COMPROMISE ON MISSION

Payload
22,000 kg

Propulsion
Green Propulsion
(LNG+LOX)

Height
60 Meter

Diameter
5 Meter

Turn around time
One week

Launch Cost
$3,000/kg

DEVELOPMENT APPROACH TO REUSABILITY

TYPICAL INDUSTRY APPROACH

- Orbit-first development
- Expendable or small launcher starting point
- Reusability introduced later
- Core systems often outsourced

SPANTRIK'S APPROACH

- Reusability-first development
- Dedicated VTVL test vehicle as the starting point
- Reusability designed from day one
- Critical systems built in-house

Validating reusability early, before scaling.

OUR DEVELOPMENT APPROACH

LEAPFROGGER IS 1:10 SCALE OF RAVEN FIRST STAGE TO DE-RISK AND FAST TRACK DEVELOPMENT.

LEAPFROGGER

- REUSABLE VTVL TEST VEHICLE
- FAST ITERATION, CONTROLLED RISK
- BUILT TO VALIDATE REUSABILITY-CRITICAL BEHAVIOR

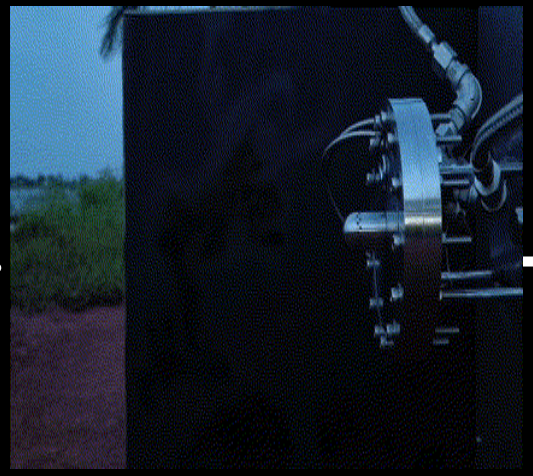
RAVEN

- FUTURE ORBITAL LAUNCH VEHICLE
- DEVELOPMENT BEGINS AFTER REUSE VALIDATION

WHAT WE HAVE BUILT AND TESTED

Tested Re-usable 2.5kN
Solid Rocket Motor

High Powered Rocket
Launches up to 1KM+



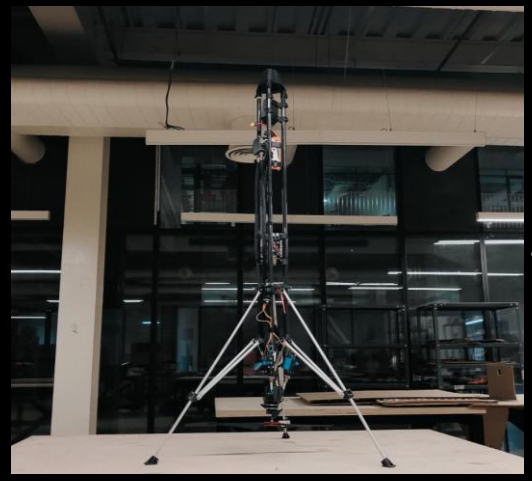
Developed Torch
Ignitor (filed patent)

Developed
Pintle Injector

Successfully Tested
Cryogenic Rocket Engine

Developed Inhouse and Tested
Cold gas thruster

TVC Development for Control
algorithm testing and flight



Built the Avionics and
GNC system Inhouse

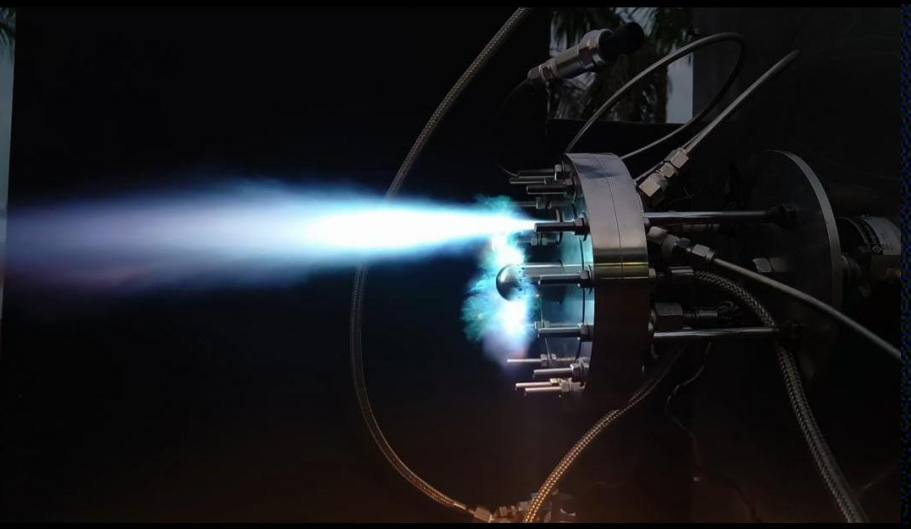
METHANE - OXYGEN ROCKET ENGINE TESTING

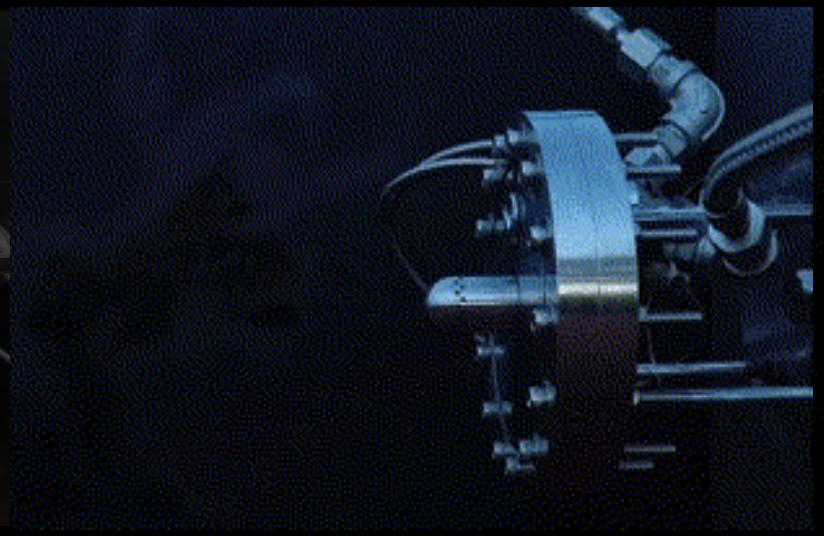
PINTLE INJECTOR

TORCH IGNITOR

PATENT

EUREKA ENGINE





PINTLE INJECTOR AND TORCH IGNITION

30-110% Throttle Range

RESTART AND THROTTLING DEMONSTRATED

200 Re-start Capability

IN-HOUSE CRYOGENIC ROCKET ENGINE

5,000N Thrust

20 Sec Full Thrust Testing

FLIGHT VALIDATION OF AVIONICS AND CONTROL

Validated guidance, control, and landing logic through flight testing

[WATCH THE VIDEO HERE]

ACCESS TO MANUFACTURING AND TESTING INFRASTRUCTURE

WE ARE RAISING $1.5 M TO LAUNCH AND LAND

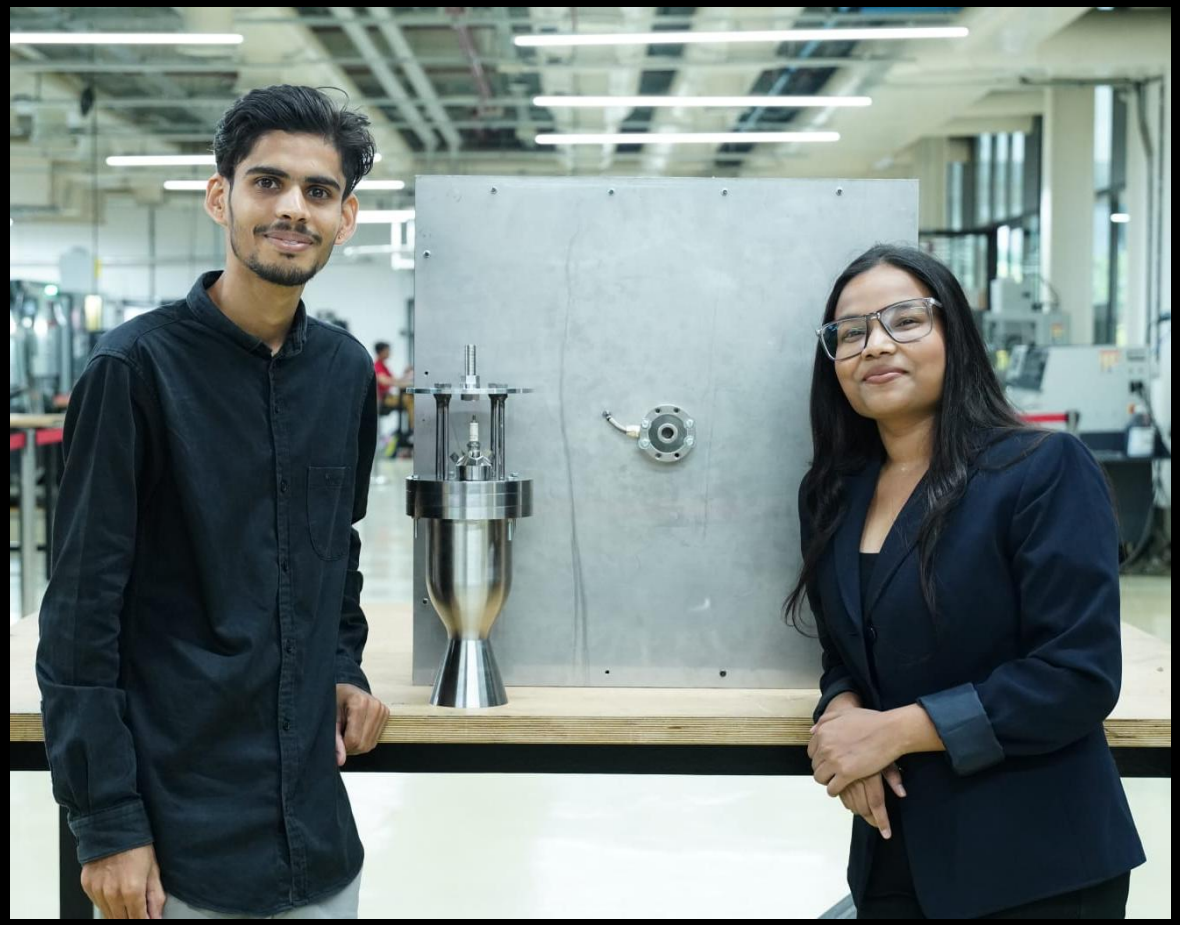
LEAPFROGGER

Launch, land, and collect reuse-critical flight data from Leapfrogger

- Complete Leapfrogger vehicle integration
- Conduct controlled VTVL flight tests
- Capture data needed to decide next scale

WATCH LEAPFROGGER FLIGHT ANIMATION

WHY THIS TEAM



- 100+ high-powered rocket launches conducted
- 4,000+ seconds of Rocket engine hot-fire testing
- Designed, built, and tested Rocket engines in-house
- Built avionics, GNC, and control software internally
- Founders own the hardest systems

Our work in the Reusable Rocket Engine has been Recognized by HONORABLE PM SHRI NARENDRA MODI JI

CONTACT US

PROUDLY
MADE IN INDIA
FOR THE WORLD

Wants to Know
More in detail

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RE-ENGINEERING ROCKETS FOR FUTURE















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