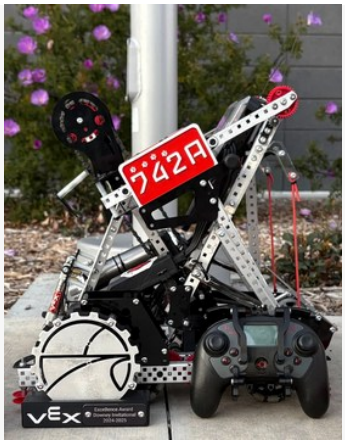
Jaime Rebollar

Mechanical Engineering + Computer Science | Stanford

ROBOTICS

Competition robots I designed and built with the Perrybotics team.

Perrybotics 2025: High Stakes



WHAT I BUILT

I led the mechanical design, CAD, fabrication, and iteration with the Perrybotics team.

RESULT / STATUS

After three major revisions, the robot had 34 components, a 7 ft/s drivetrain, and 1.5 lb less mass. It fit below 18 × 18 × 15 inches.

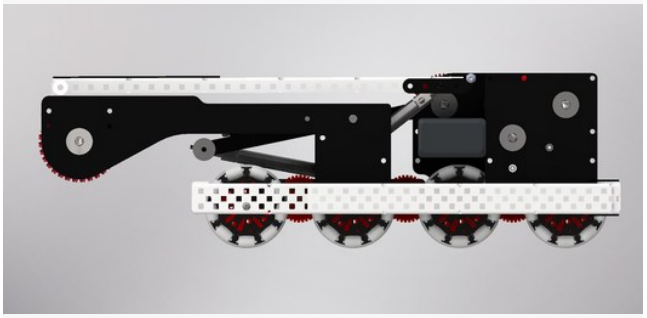
Tools: Autodesk Inventor, Onshape, DigiLab

34
components in the assembly

7 ft/s
drivetrain speed

Read the full build story online

Perrybotics 2024: Over Under



WHAT I BUILT

I led the mechanical design and helped build the chassis, intake, and catapult with the Perrybotics team.

RESULT / STATUS

We fit roughly 50 components into an 18 × 18 × 6-inch configuration, with a drivetrain speed of 7 ft/s.

Tools: Autodesk Inventor, Onshape, Balsa prototyping

≈50
components in the robot / estimated

7 ft/s
drivetrain speed

Read the full build story online

jrebollar@stanford.edu

Six projects. Full stories, photos, and CAD at jaimerebollar.com.

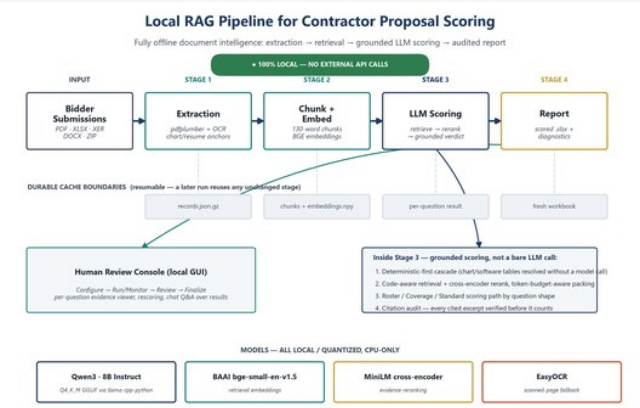
Jaime Rebollar

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SOFTWARE & APPLIED AI

Tools I built during my Southern California Edison internship.

On-Device AI Proposal Scorer



126 to 8 h

estimated reviewer time / estimated

11

contractor proposals evaluated

WHAT I BUILT

I built the on-device Python workflow, from document preprocessing and retrieval through scoring and the reviewer interface.

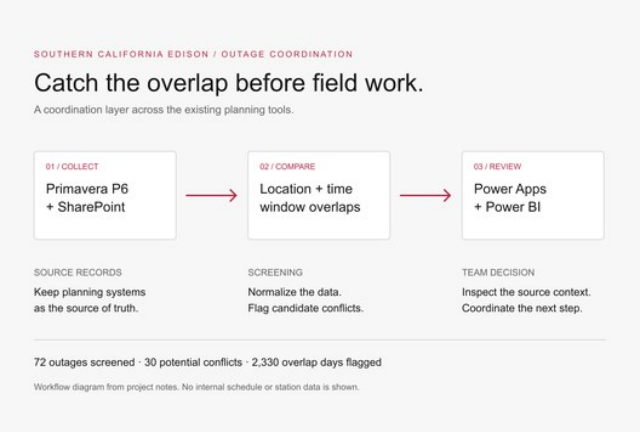
RESULT / STATUS

Estimated review effort dropped from 126 hours to 8. In the project comparison, the system's scores were within ±7% of the human review baseline.

Tools: Python, Qwen3-VL 8B, llama.cpp

Read the full build story online

Outage Coordination Platform



72

outages screened pairwise

30

same-station or window conflicts surfaced

WHAT I BUILT

I built the data workflow and review interface connecting Primavera P6, SharePoint, Power Apps, and Power BI.

RESULT / STATUS

The platform screened 72 planned outages and flagged 30 potential conflicts across 2,330 overlap days for the team to review.

Tools: Primavera P6, SharePoint, Power Apps

Read the full build story online

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Jaime Rebollar

Mechanical Engineering + Computer Science | Stanford

INDEPENDENT BUILDS

Projects where I handle the design, fabrication, electronics, and testing.

Three-Pound Combat Robot



3 lb
competition mass limit / target

-30%
chassis mass change

WHAT I BUILT

I designed, sourced, fabricated, wired, and assembled this three-pound vertical drum spinner myself.

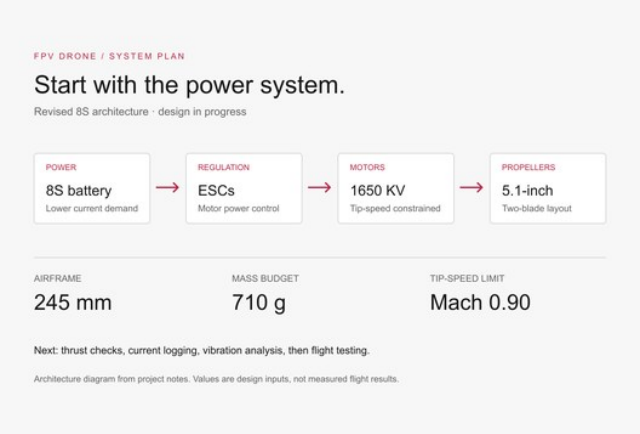
RESULT / STATUS

The nine-piece chassis cut frame weight by 30%. The differential drive reached 5.17 ft/s, with control response below 100 ms.

Tools: Onshape, Additive manufacturing, Brushless drive electronics

Read the full build story online

High-Speed FPV Drone



245 mm
selected frame size / target

710 g
current design mass budget / target

WHAT I BUILT

I'm handling the airframe design, propulsion calculations, CAD, component selection, and test plan for this independent drone build.

RESULT / STATUS

The current design uses a 245 mm frame, 8S power, and 5.1-inch two-blade props within a 710 g mass budget. Fabrication and flight testing are still ahead.

Tools: Onshape, Aerodynamic estimation, Electrical power budgeting

Read the full build story online

jrebollar@stanford.edu

Six projects. Full stories, photos, and CAD at jaimerebollar.com.