# Spacecraft Design Lab

AA136/236

Course Logistics

# Teams: Mechanical/Mechanisms

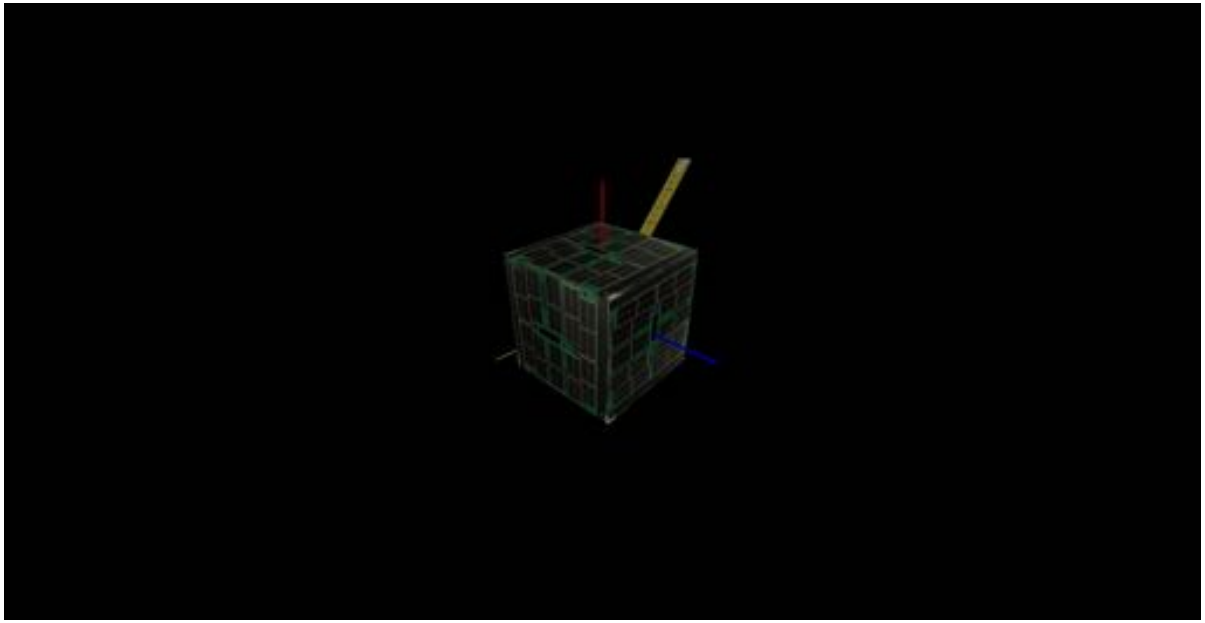
Responsibilities:

- Spacecraft Structure
- Deployment mechanisms
- Batteries
- Thermal
- Vibration
- Materials Selection
- Mass/Inertia Properties

# Teams: Software/GNC

Responsibilities:

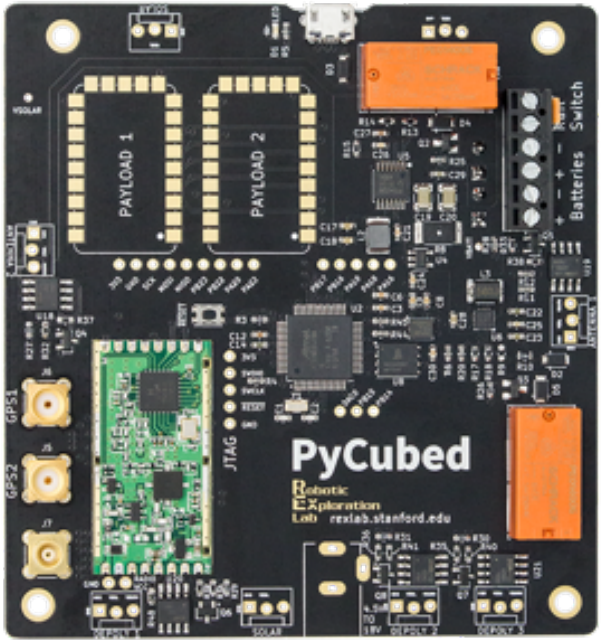
- Main flight software state machine
- Spacecraft simulation
- Attitude determination filter
- Controller implementation
- Hardware in the loop testing



# Teams: Flight Computer/Sensors

Responsibilities:

- PyCubed PCB layout + fabrication
- Torque coil drive electronics
- Camera
- Radio
- Low-level hardware-interface code



# Teams: Electrical/Actuators

Responsibilities:

- Solar panel design + fabrication
- Magnetic torque coil design + fabrication
- Antenna design + fabrication
- Power budgets
- RF link budgets
- Radio testing

# Teaching Team

Zac Manchester
Assistant Professor
Lead Instructor

Max Holliday
Grad Student
Avionics/Electrical Lead

Andrew Gatherer
Grad Student
Mechanical/GNC Lead

# First Assignment

1. Join the course Slack workspace (SpacecraftDesignLab) and briefly introduce yourself in the #introductions channel.

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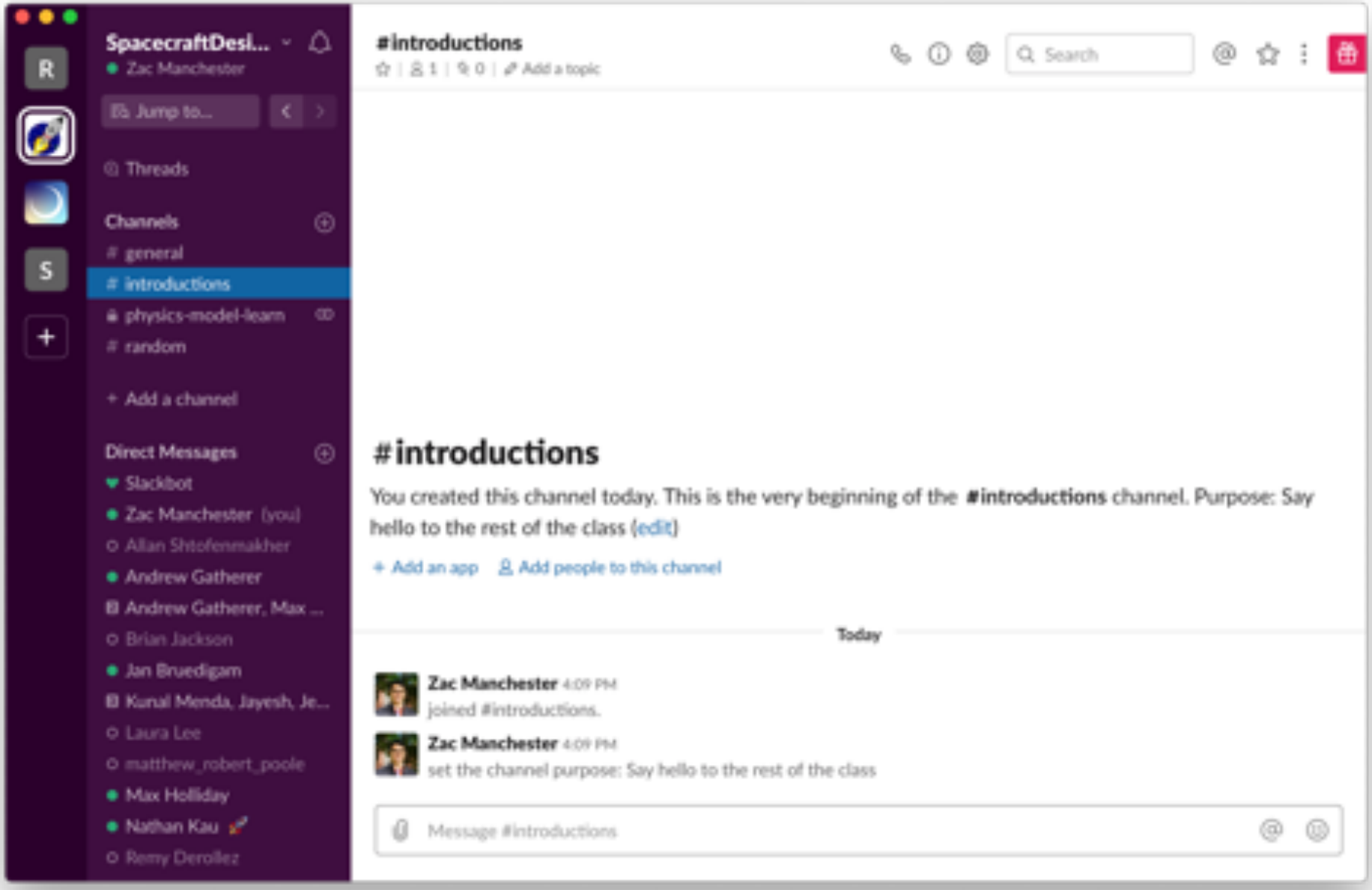

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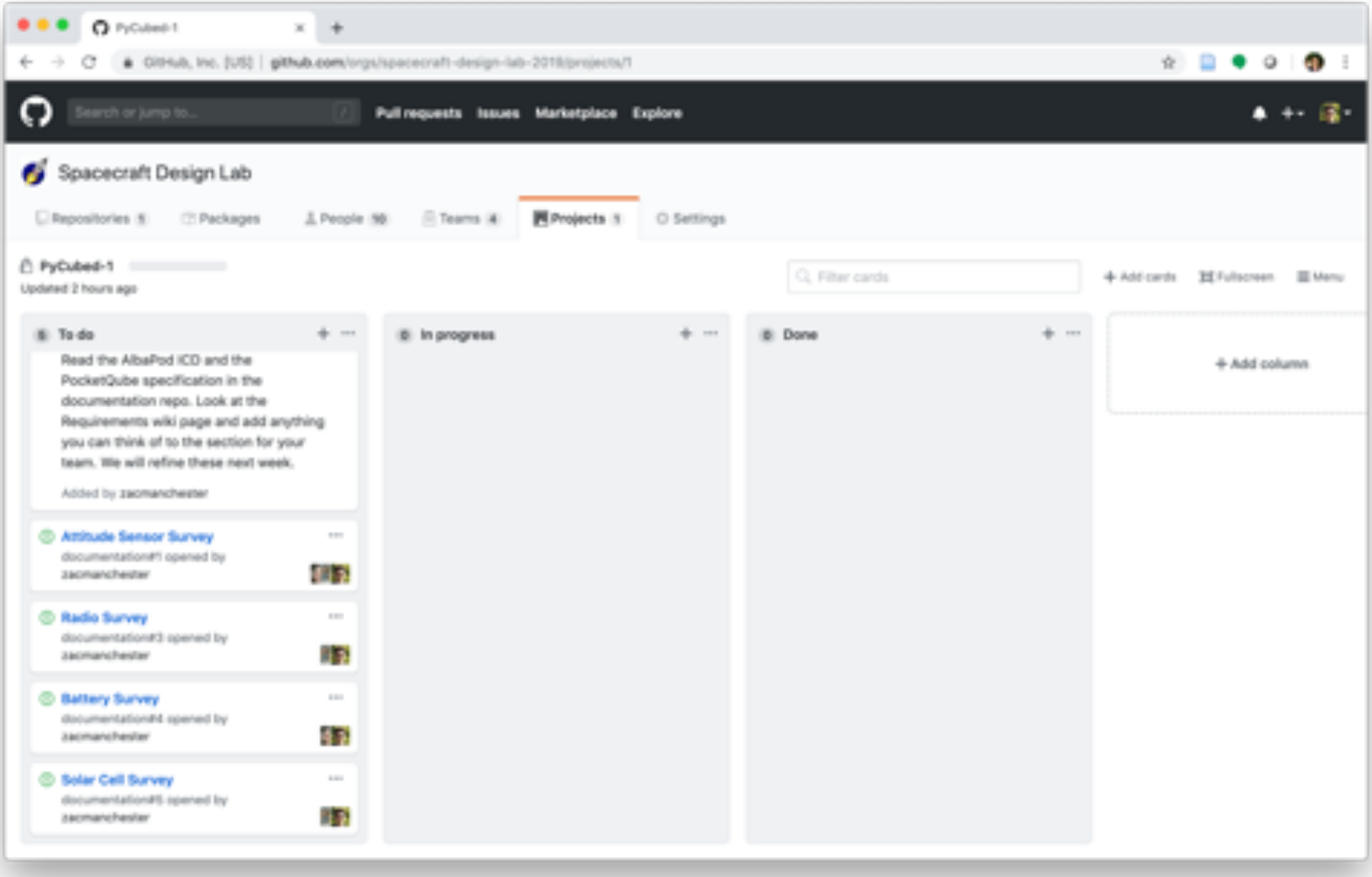

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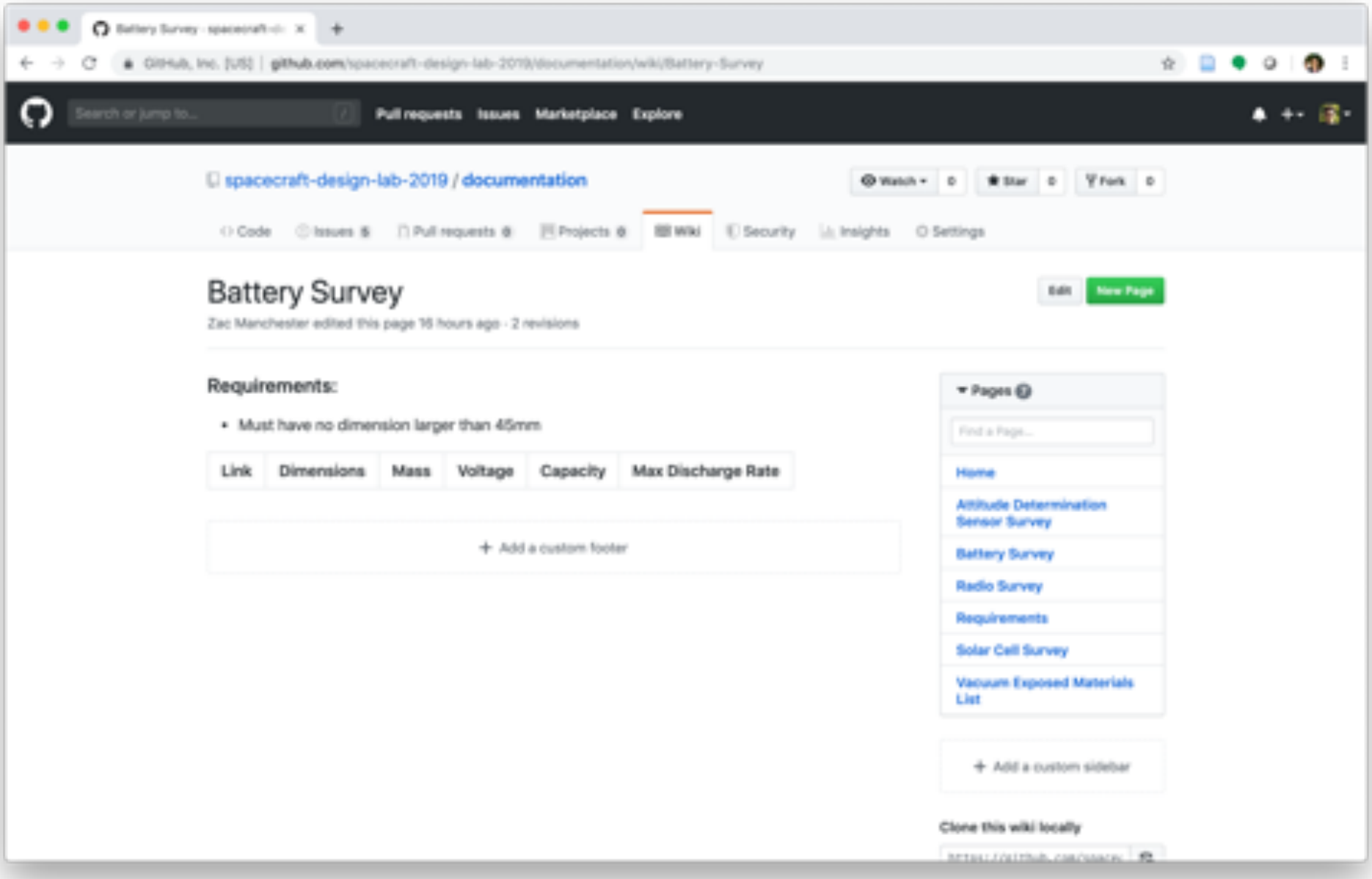

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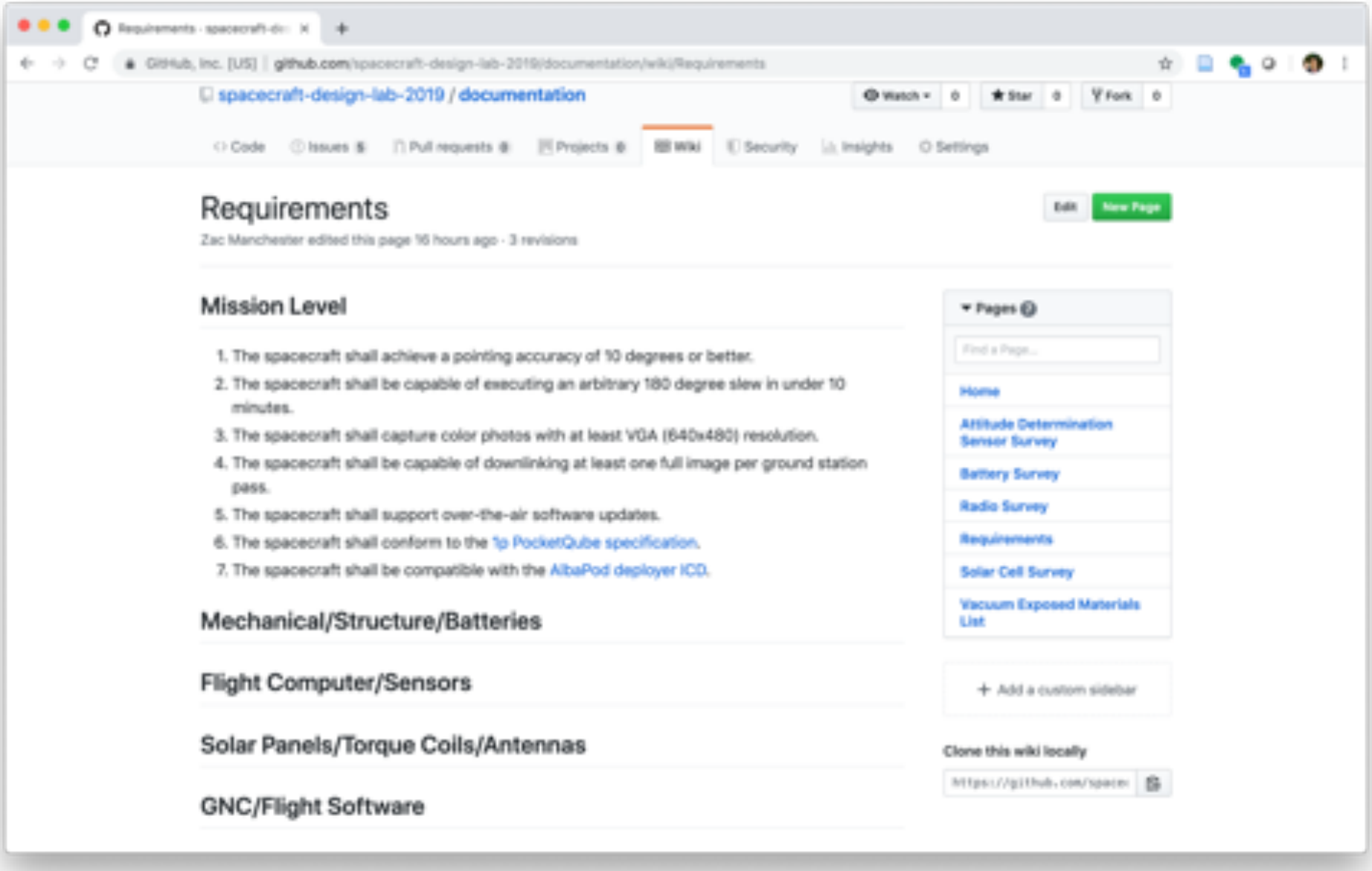

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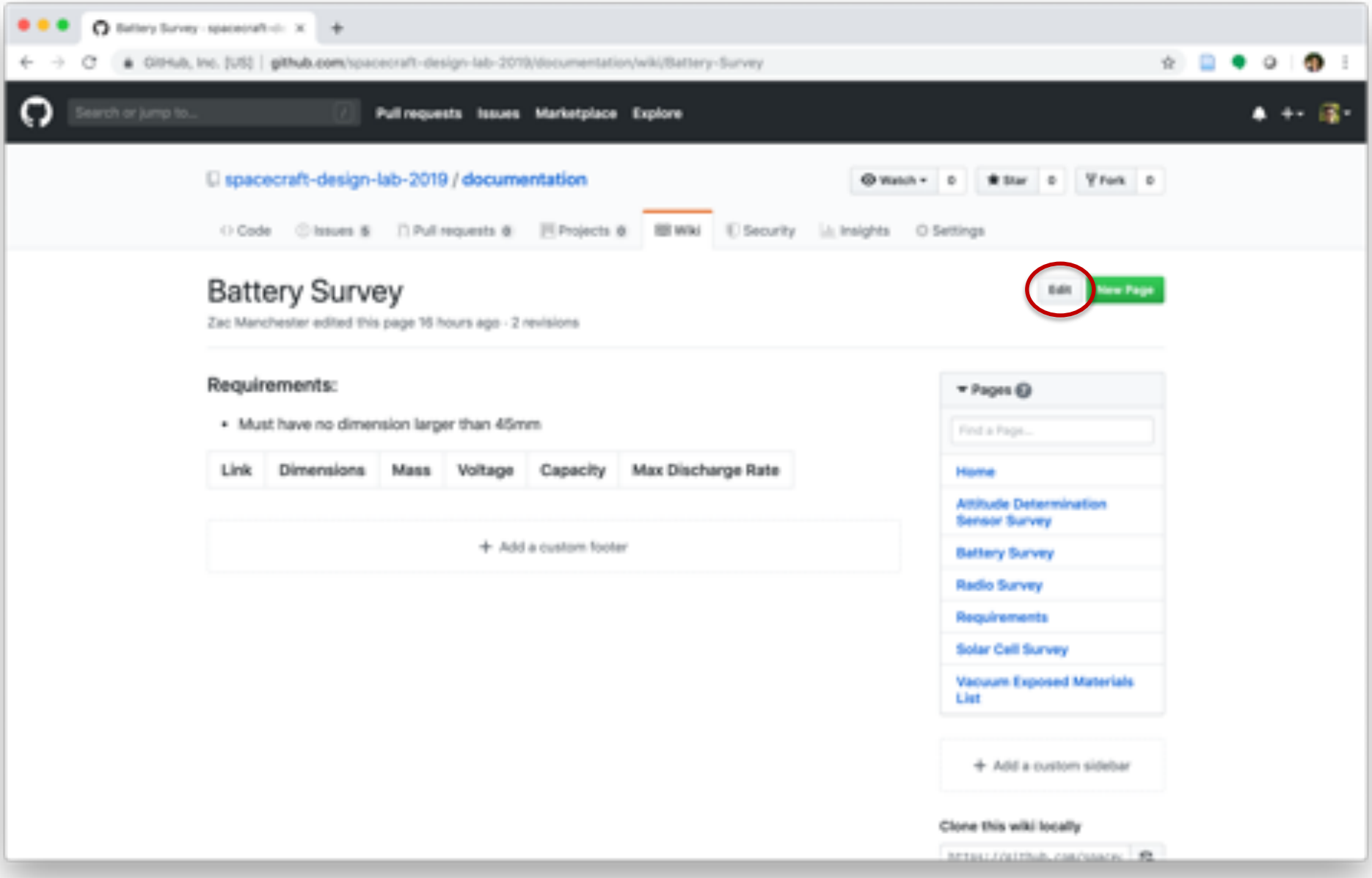

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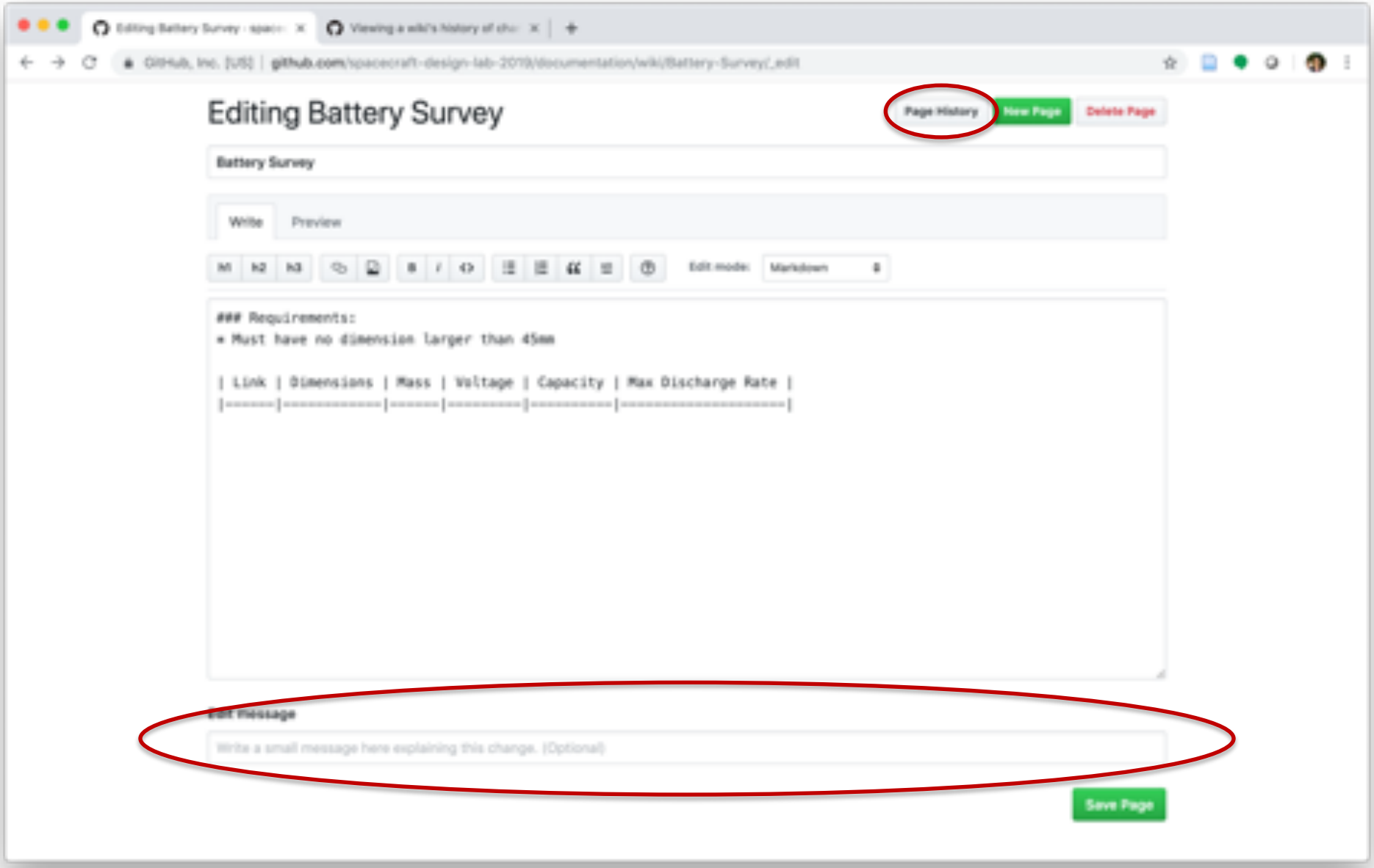

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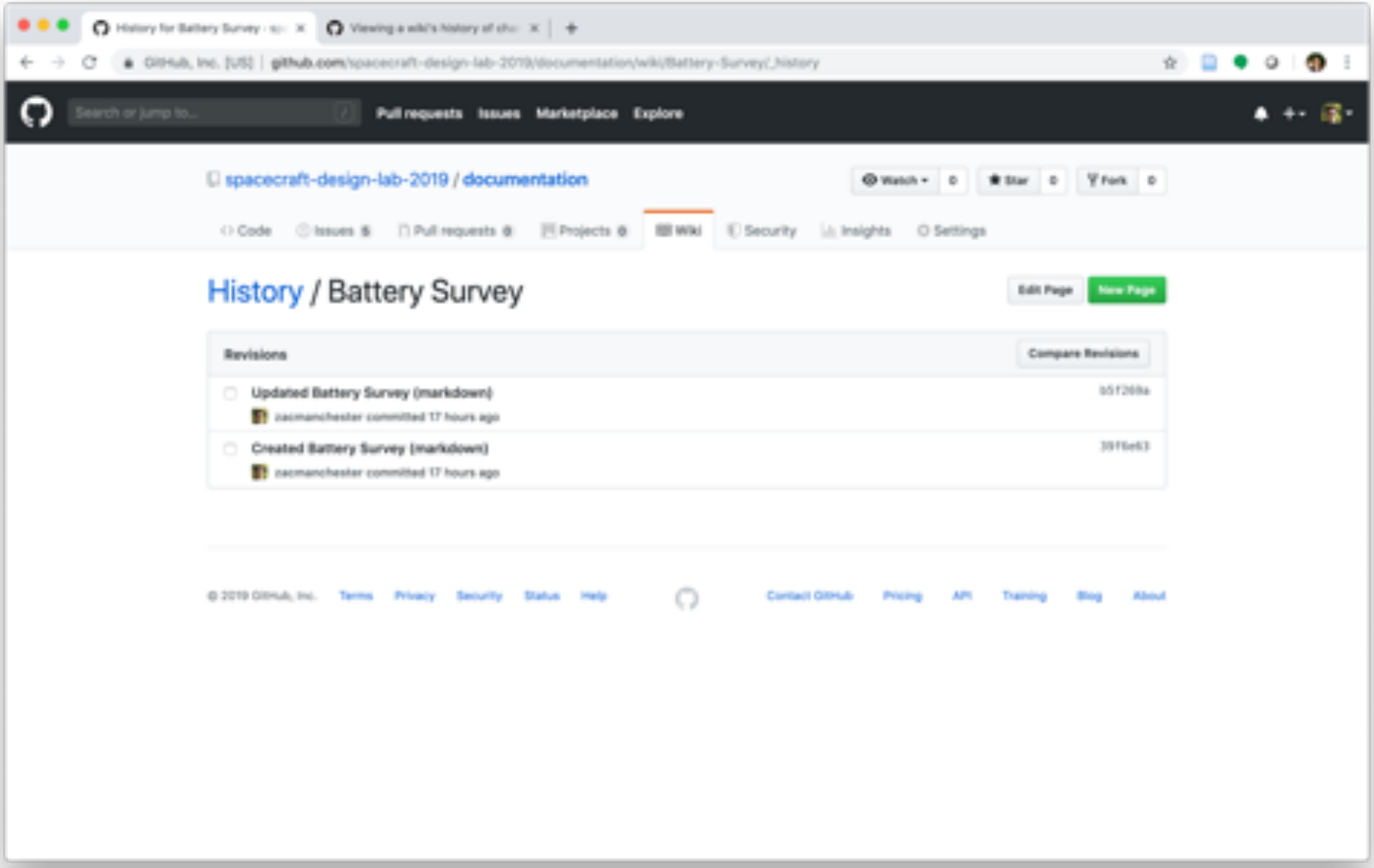

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6. Everyone must make at least one git commit.
7. Each team will present their component survey results and requirements at the next meeting on Monday.

# Course Logistics

- All-hands meetings will be Mondays at 4:30 in Skilling
- Sub-team meetings will be scheduled on Mondays and/or Wednesdays during the allotted class time.
- There will occasionally be lectures on selected topics after the Monday all-hands meeting (within the designated class time).

# Course Policies

- Attendance at all-hands and sub-team meetings are mandatory and everyone is expected to participate.
- The Kanban will be used to keep track of what individual team members are working on. We will go through it every Monday and everyone will give a quick update on the status of their tasks (what was done last week, what is getting done this week).
- Documentation on the wiki will be used in lieu of a final report.
- Git commit history will be used to help evaluate each person's contributions.

# Grading

- 25% Individual weekly meeting participation
- 25% Individual technical contributions as gauged by git commit history and team surveys.
- 50% Completeness and quality of wiki documentation

# Questions?