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Sponsor:
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Mentor:
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Background

Bioinformatics

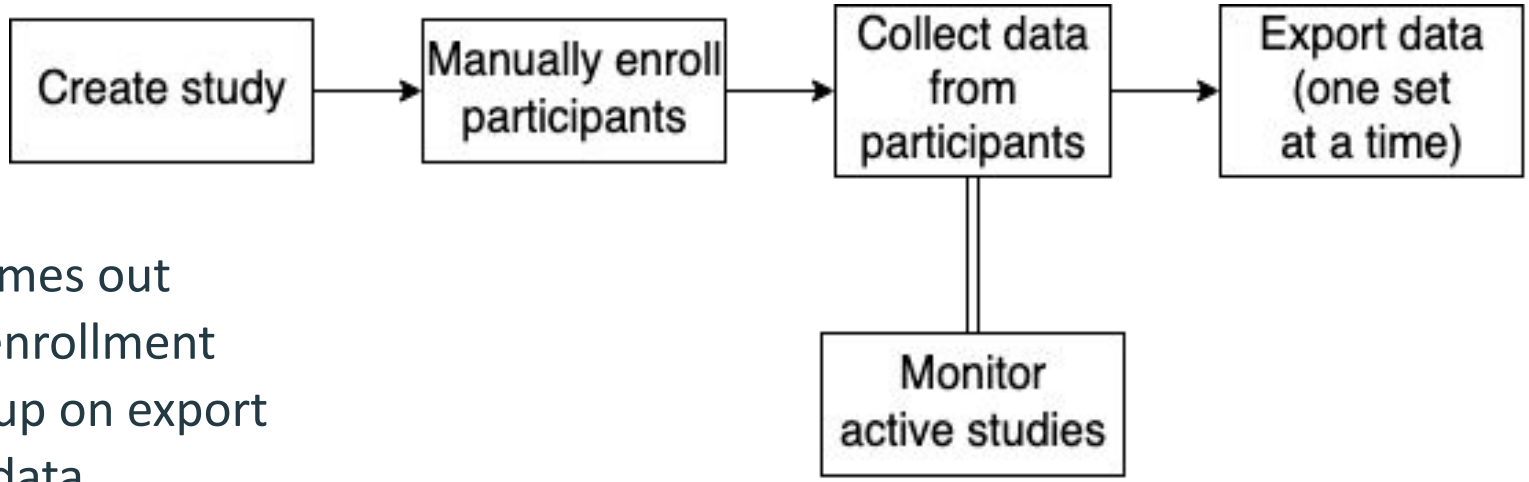
- Field of collecting health info
- Tracks physical activity/heart
- Heart disease research
- 1 in 4 deaths caused by heart disease
- Bioinformatics can save lives

Our Clients

Dr. Kyle Nathan Winfree
Associate Professor
Wearable Informatics Lab

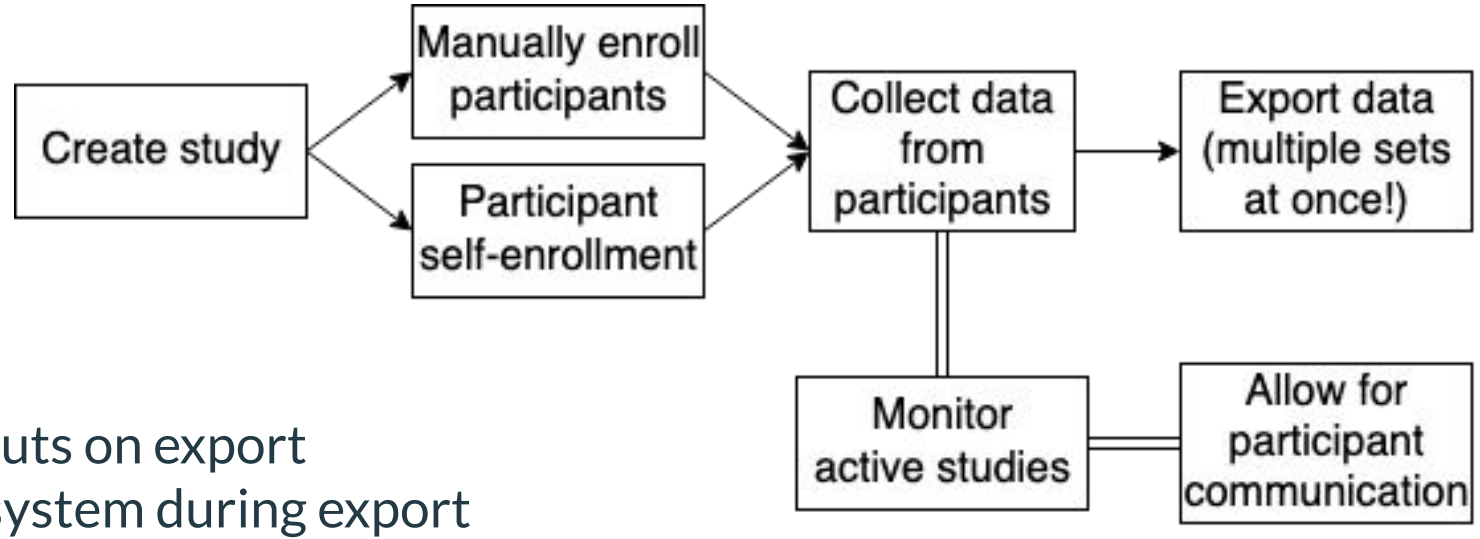
Dr. Eck Doerry
Professor of Computer Science

Problem Statement



- Export times out
- No self-enrollment
- UI locks up on export
- Missing data

Solution Statement



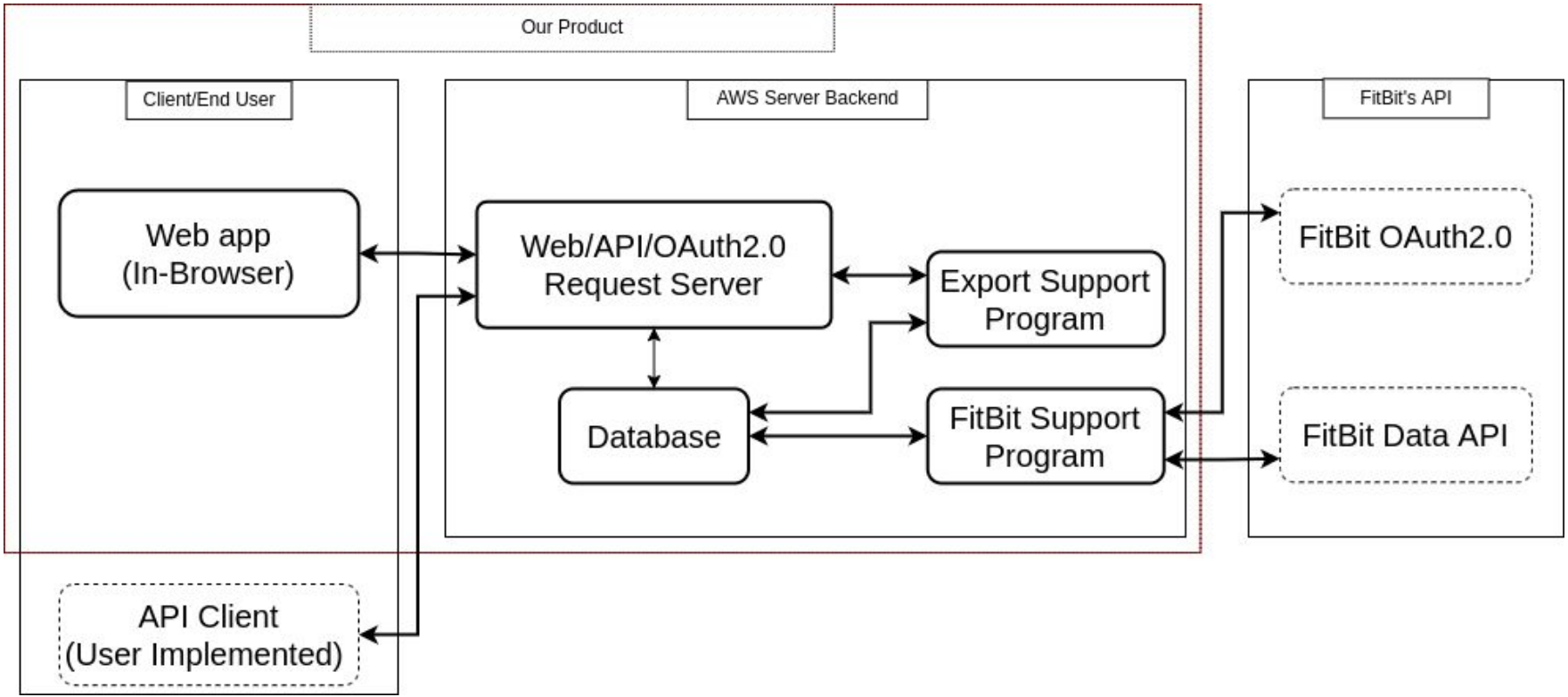
WEB APP

- No timeouts on export
- Can use system during export
- All data collected

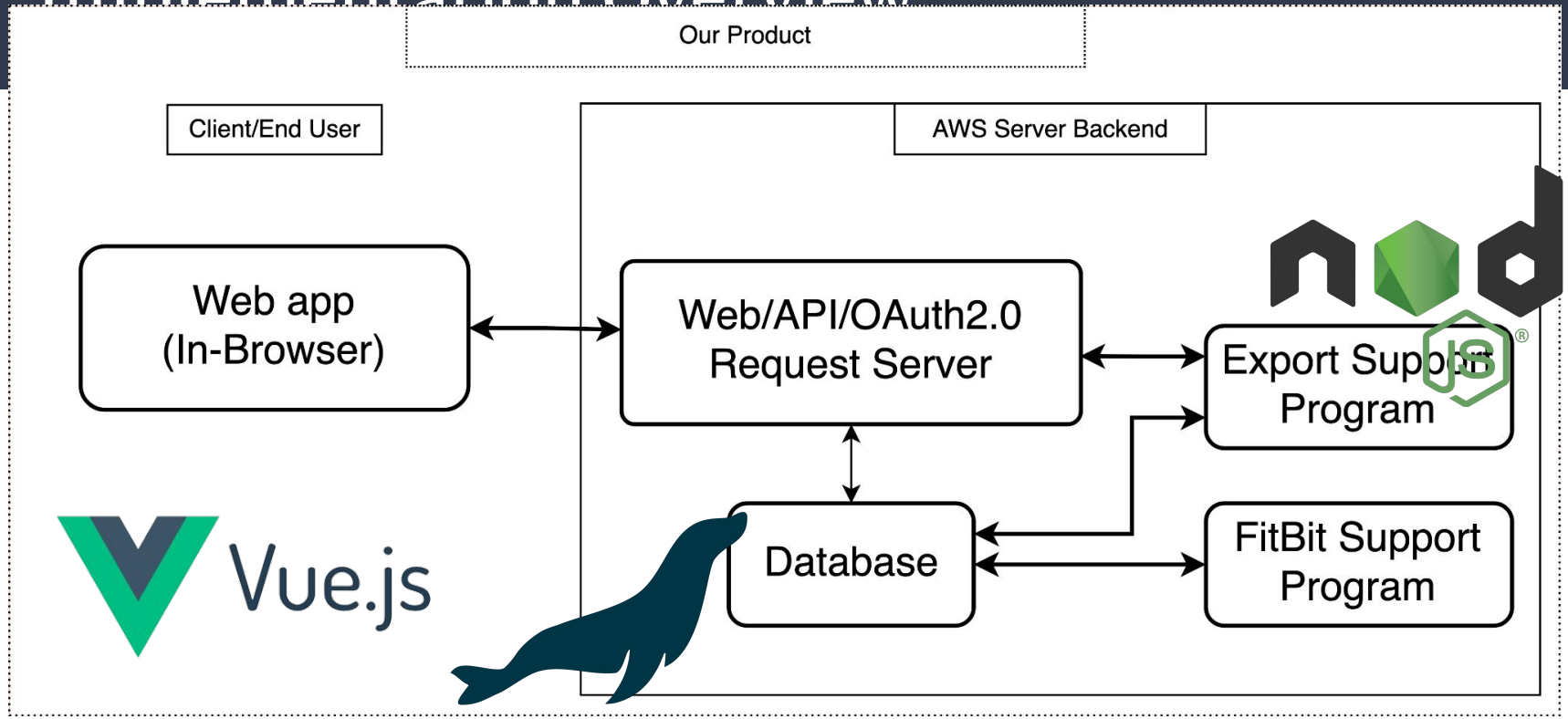
Requirements

- Create and manage accounts, studies, and participants
- Export data in csv format, zip file
- Enroll participants manually or self-enroll
- Collect participant data using Fitbit web api
- Store and backup participant and study data

Architecture Review



Implementation Overview



Prototype Review

Show account creation/log in

Show study Creation,

Show Study Modification

Show Adding Participants manually

Walk through the participant enrollment process

Show data export

Testing Plan

Unit testing

- Using jest
  - Request Validation
  - Form Validation

Integration testing

- Using Cypress for front-end
- Jest for database validation

Usability testing

- Real user test group

Challenges and Resolutions

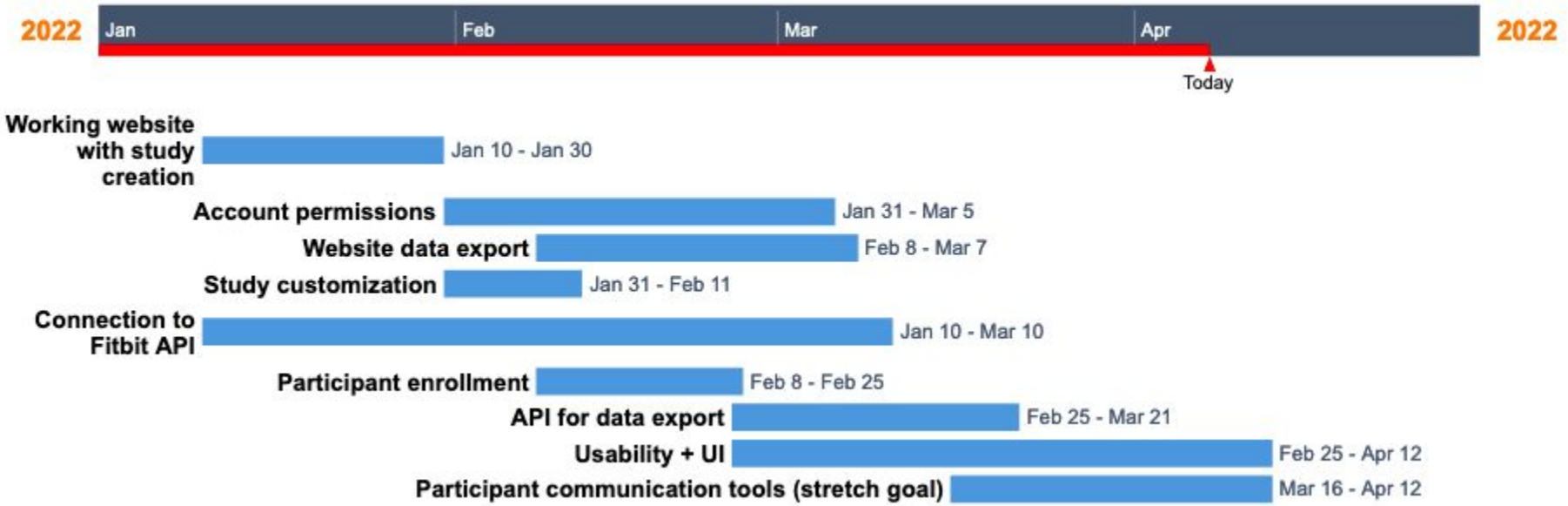
Main obstacles:

- NAU firewall permissions for Fitbit Data collection
- NAU email server permissions

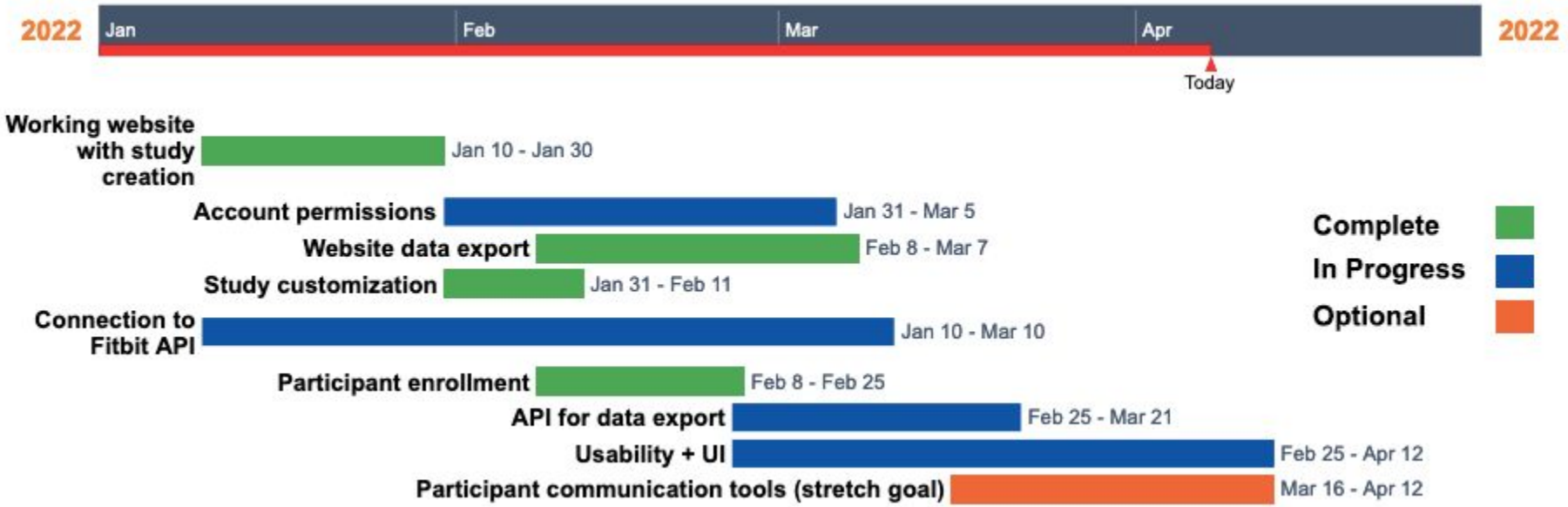
How it was resolved:

- Given permission and open port was created for our project
- Currently no resolutions for NAU email server

Schedule


2022
Jan
Feb
Mar
Apr
2022
Today
Working website with study creation
Jan 10 - Jan 30
Account permissions
Jan 31 - Mar 5
Website data export
Feb 8 - Mar 7
Study customization
Jan 31 - Feb 11
Connection to Fitbit API
Jan 10 - Mar 10
Participant enrollment
Feb 8 - Feb 25
API for data export
Feb 25 - Mar 21
Usability + UI
Feb 25 - Apr 12
Participant communication tools (stretch goal)
Mar 16 - Apr 12

Schedule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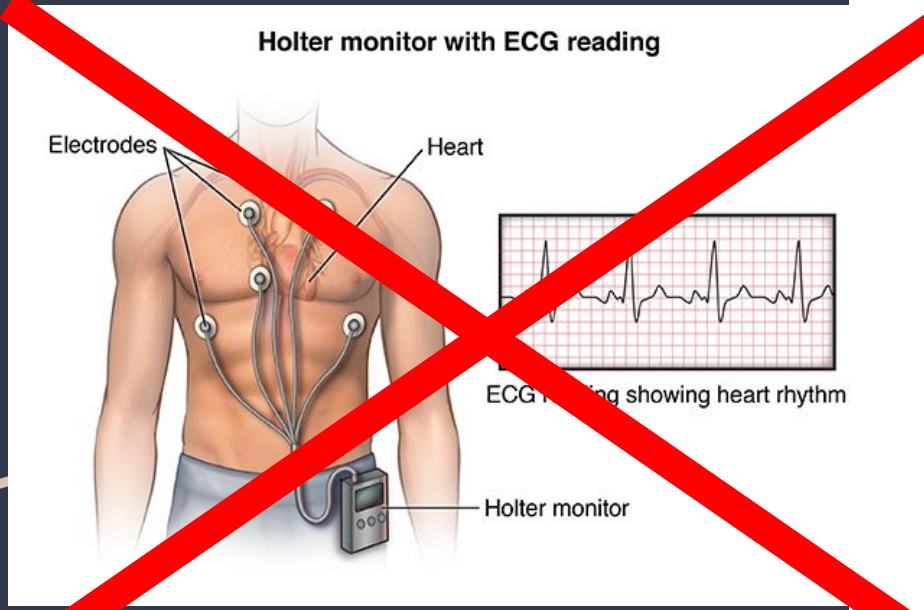
Complete
In Progress
Optional

Conclusion



- Bioinformatics can help save lives
- Web app to manage Fitbit study data
- Prototype finishing, now for refinement