

SEADS Backend

Smart Energy Analytic Disaggregation System

Sponsored by CITRIS, Sponsor: Ali Adabi, UCSC

SEADS Backend Team Members

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Introduction

The goal of the SEADS Backend project is to produce software that captures, stores, and classifies power usage data gathered from electronic devices using SEADS hardware.



Goals

Set out to achieve

- Collect SEAD panel data
- Accurate classification
- Separate data which contains multiple devices superimposed

Have achieved

- Collect SEAD plug data
- Efficient Data Collection Process
- Specific Classification
- Visualizing Data
- Create database to capture/house data

Challenges

Development Product

- Malfunctioning data collection hardware
- Poor-quality inherited code

Development Process

- Choosing project tracking software
- Determining product specifications
- Limited quantity of hardware devices
- Distributing tasks in a large team

Technologies Used



GitHub



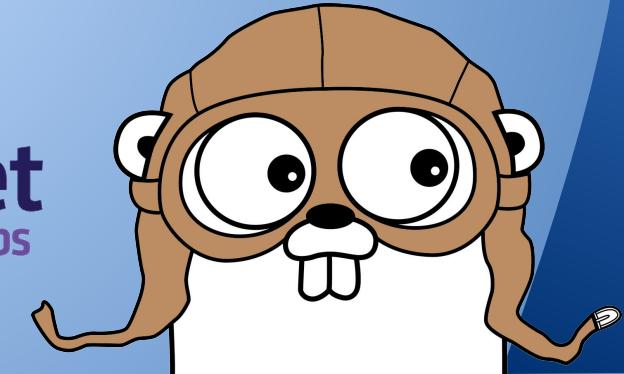
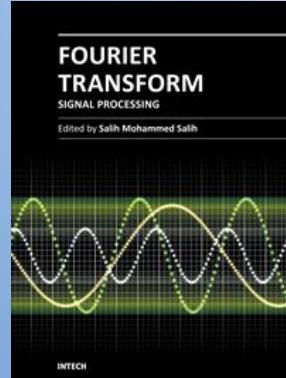
ubuntu



PostgreSQL



VAGRANT



Project Management Tech



MEETINGS SCRUM BOARDS **WOW** SCRUM MASTER SCRUM BURNUP CHARTS SCRUMMING YES SCRUM MEETINGS SCRUM BOARDS WOW SCRUM

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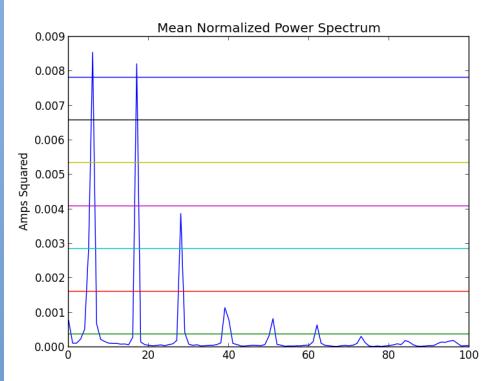
ETTINGS SCRUM BOARDS WOW SCRUM

Project Management Techniques

- Scrum meetings three times per week
- Tracking progress with burnup charts
- Task lists and Scrum boards with assignment and estimates of effort

Things_Enjoyed

- Fourier analysis
- Data analysis process
- Coding
- Parallel programming



!(Things_Enjoyed)

- Collecting data (manual labor)
- Slaving away over a power analyzer and SEAD plug for many hours
- Waiting for the old server to work
- Network connectivity

Lessons Learned

Worked

Group development time

Assigning tasks to individuals

Maintaining good communication

Didn't Work

Meeting too frequently

Trying to organize same-day meetings



