

Supporting Research Teams at Purdue

Overview of Engagement Model and Best Practices

August 19, 2021

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Overview

- ▶ **Where Do We Sit?**
Orientation to other groups
- ▶ **Tiers of Support**
Reactive Engagements
- ▶ **Outreach and Interviews**
Proactive Engagements
- ▶ **Projects**
Origination, Timeline, Management, Cost, Examples
- ▶ **Best Practices**
???

Where Do We Sit?

- ▶ **IT Research Computing**
Part of central IT organization
- ▶ **Provide resources (e.g., computing), services, and solutions**
- ▶ **Collaborate with other groups**
Centers, Libraries, Departmental IT, ...

Tiers of Support

Reactive Engagements

Level 1

- ▶ Tickets
- ▶ Coffee Hours

Level 2

- ▶ Direct Support (1:1)

Outreach and Interviews

Proactive engagements to build relationships

► New Faculty Visits

Introductions, resources, contact information, answer questions

► Strategic Partner Touchpoints

- Could you tell me a little about your research?
- Have our services been helpful in pursuing this?
- Is there anything you are not currently able to do or do well?
- Are there any special technologies upcoming projects may need?
- Would you like your students or postdocs to get any training on our systems?
- Do you have any suggestions or concerns for us?

Projects

Advanced Support

- ▶ **Origination**

Tickets, Coffee Hours, Direct, Events, Meetups

- ▶ **Timeline / Management**

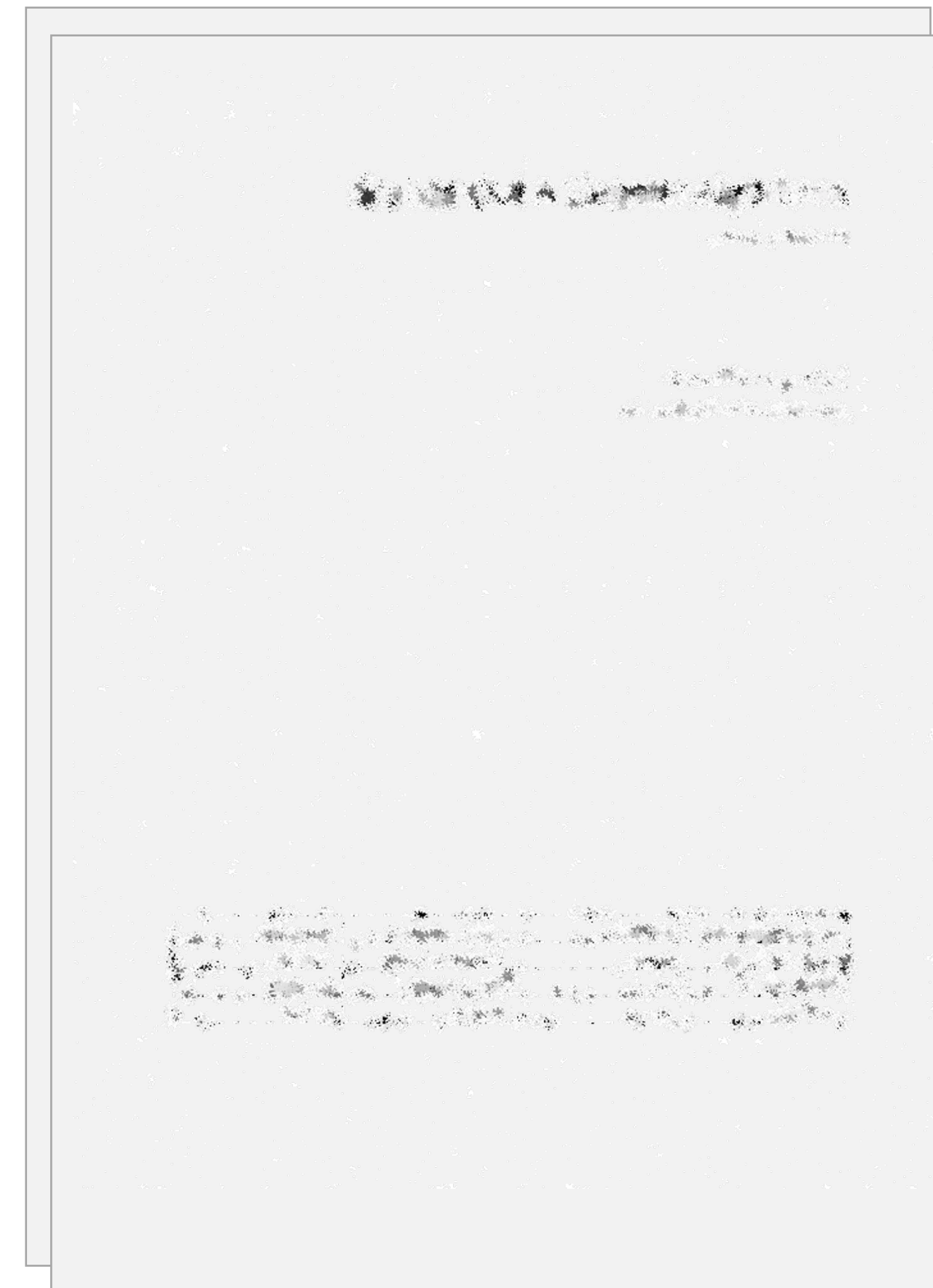
Project document is drafted before-hand

- ▶ **Cost**

Free consultation + 2-3 week engagement


Tier-1 (\$\$), Tier-2 (\$\$\$) – Rate vs Cost-sharing

Detailed Project Document



Project Examples

Short (days)




Scale-out existing code

User came to coffee hours a few times asking questions about parallelizing a genetic algorithm currently running in a Jupyter notebook.

Suggested we extract single instance to stand-alone script and use existing tools to scale-out many instances on the cluster. Would have been a lot of work to learn for student.

I turned it into a one-day project and implemented the changes and workflow over Teams call in real time while recording.

Medium (weeks)



Data Acquisition via Web Scraping

Faculty wants to acquire a large dataset from a foreign website that is not readily downloadable and lacks necessary skills to reliably accomplish the task.

Our staff have experience with this sort of thing and can implement a more robust solution in less time.

Long (months - years)



Full Featured Solution

Research group sought out expertise in ML for a particular use-case. Wanted to build forecasting engine to feed into a recommendation system for a large citizen-science project.

After pitching many architectural ideas for all the elements of such an endeavor, we decided to work together on building the full solution.

This engagement has lasted multiple years and constituted a mutual relationship including collaborative grant opportunities.

Best Practices

Continuous Improvement

- ▶ **Meet with researchers (virtual or in person)**
Coffee hours, 1:1 meeting, faculty visit, events, ...
- ▶ **Facilitate self-service where possible**
Web portal, documentation, tutorials, automated tools, ...
- ▶ **Create detailed working documents for advanced support projects**
Include timeline, roles, outcomes, cost, (beforehand and share it)
- ▶ **Recognize Constraints**
We can't say yes to every request

