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## RACHEL PATZER

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### Required Skills:

(List skills needed) – Data Visualization, Mobile App, Web Development, Responsive Web Design, Human Centered Design, Workflow/Process Optimization, experience working with FHIR and API, Visual Insight, Tableau, OBIEE, Shny, AWS

### Preferred Team Communications:

Conference Call, Google Hangouts, in person

### Data Sources:

Local structured and unstructured patient data of kidney transplant recipients, United States Renal Data System (USRDS) data (national)

### Other Items:

Project has time zone flexibility. Mentors and students will determine a good time for virtual meeting

### Team Info:

Needs a Developer, Tester, Analyst, Project Manager. Allows one team of 4-6 members.

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## PREDICTIVE ANALYTICS FOR CLINICAL DECISION SUPPORT TOOL FOR KIDNEY TRANSPLANT RECIPIENTS

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Optimally allocating scarce resources to kidney transplant recipients at highest risk of hospitalization after transplant could help improve health outcomes and reduce healthcare costs. The goal of our project is to incorporate prediction models for re-hospitalization into an electronic hospitalization risk dashboard for physicians to identify patients at highest risk for hospitalization. By risk-stratifying kidney transplant patients in real-time at the time of transplant, we could allocate individualized, supportive interventions to prevent or prepare patients for hospitalization. Targeting the highest risk transplant patients may reduce post-transplant hospitalization for these patients.

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### PROJECT OBJECTIVES

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This proposal will take dynamic predictive models using analytical techniques such as machine-learning and natural language processing of both structured (e.g. lab values) and unstructured data (e.g. written progress notes), and incorporate these models into novel data sources (i.e. a real-time, validated, Oracle Business Intelligence Tool that integrates numerous data sources within one central source) to create a proof-of-concept dashboard for use in the patient's medical record. Ultimately, the dashboard will be used by physicians to identify patients at high-risk of rehospitalization after kidney transplant.

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### SUCCESSFUL PROJECT

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To Be Discussed

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**Intellectual Property:** Project involves a government agency so the resulting project is made available to the public. Students do not own IP. Students will be recognized as contributors.