MCEH Internship 2019 - 2020

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<tr>
<th>Internship title</th>
<th>Analytical Methods for Optimizing Healthcare Insurance Utilization Research Internship</th>
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<tr>
<td>Reports to</td>
<td>Prof. Kimia Ghobadi, Department of Civil Engineering, WSE Dr. Kayode Williams, SoM</td>
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**Internship purpose**

We are seeking an enthusiastic intern who is interested in data analytics in healthcare and would like to gain practical experience in hospital environments too. This internship is a collaboration between the Whiting School of Engineering, the Johns Hopkins Hospital, and the Carey School of Business. The student is expected to work closely with clinical staff as well as faculty and mentors from the collaboration. The goal of this project is to use data analytics and operations research to a) understand the process of health insurance claims for patients, hospitals and clinicians, b) design metrics for resource utilization (e.g., the staff, the time to task completion), and c) design interventions to improve the efficiency. The student will have access to a large data set of insurance, process and clinical data. Additional data will be collected from the healthcare staff through this internship. The interventions suggested by this project will be assessed using data analytics and will be presented to healthcare leadership for potential implementation. The internship will start as soon as possible and is expected to last 12 weeks. There is a possibility of extension depending on performance of the student.

This project is especially suited for students who are eager to use their engineering knowledge and techniques in the real-world and make an impact on healthcare operations. No prior knowledge is required but an enthusiasm to apply engineering techniques to healthcare/financial environments is highly recommended. Through this internship, the student will gain practical experience and insights into healthcare data and hospital/insurance operations. The student will have access to dedicated faculty in medicine (Dr. Kayode Williams) and engineering (Dr. Kimia Ghobadi), as well as a team of other faculty, students, and clinical staff and managers at Johns Hopkins Medicine. The project will prepare the student to showcase their knowledge and expertise in data analytics, analytical thinking, and operations research, in general, and in healthcare and insurance data and operations, in specific. The goal of this project is to use raw data and information to provide evidence for operational decisions, organizational strategies, and policy-making in healthcare.

All Malone Center interns are expected to create a poster and present the results of their internship at the Johns Hopkins Research Symposium on Engineering in Healthcare in 2020

**Short Project Description**

<table>
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<tr>
<th>Research Project</th>
<th>Resource Utilization in Hospital Insurance Claims</th>
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<tr>
<td>Description</td>
<td>Improving the current practice of insurance authorization and claims in hospitals using a data-driven approach. In this project, the student will learn the current process and use hospital and insurance claim data to validate the process and design interventions to improve resource utilization.</td>
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| Tasks            | • Week 1-3: Understanding the environment and creating a map of the process  
                   • Week 3-6: Interacting with the database for prescriptive data analytics |
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<tr>
<th>Required Skills</th>
<th>Strong communication skills. Good analytical skills and databases experience is preferred.</th>
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<tr>
<td>Anticipated Start Date</td>
<td>As soon as possible/negotiable</td>
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<tr>
<td>Duration of Project</td>
<td>Appx 3 months with a possibility to extend</td>
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**Qualifications**

- Undergraduate or master students in computer science, mathematics, management sciences, or relevant fields. No previous research/industry experience required
- Strong communications skills
- Knowledge of Process mapping
- Proficiency in programming and database skills
- Must demonstrate strong critical thinking and analytical reasoning skills
- Prior experience with data analytics is desired but not necessary
- Prior experience in healthcare operations is also desired but not necessary
- Ability to execute assigned project tasks within established schedule
- Possesses sound documentation skills; writes and communicates clearly and concisely

**Working conditions and physical requirements**

Indoor- shared office environment
Possible exposure to clinical setting (observing workflow)
Ability to physically operate computer required
May need to lift up to 20 lbs

**Compensation**

One academic credit OR $13/hr

**Anticipated Start Date**

As soon as possible/negotiable

**Duration**

Duration appx 12 weeks. Possibility for extended internship depending on performance, project need and interest on both sides

**Location**

The Johns Hopkins Homewood Campus, 3400 North Charles Street, Baltimore, MD 21218
The Johns Hopkins Medical Campus, 600 N Wolfe St, Baltimore, MD 21287
Application Process

Email your resume and one paragraph describing what you are looking to gain from this internship to Vess Vassileva-Clarke: vclarke@jhu.edu.

Please include the name, email address and/or telephone # of your academic adviser (the faculty member who advises you).

**Use Subject line “MCEH Insurance Claims Resource Utilization Internship- 2019-2020” for your email.**

Position will remain open until filled. Applications received **on or before Dec 15, 2019** will be given first consideration.