

Summer 2014 Undergraduate Internship Project Descriptions



Below you will find the projects available for Summer 2014. In the online application, you will be asked to rank the top four projects you are most interested in and have the required skill set

Michael Chiang MD & Thomas Yackel MD. Evaluation of EHR system implementation and workflow at an academic medical center. This would involve analysis of outcome measures such as speed, efficiency, cost-effectiveness, and user satisfaction. There may also be opportunities for projects which relate to optimizing user interface design for clinical decision-making. Skills: statistical analysis.

Michael Chiang MD & Jayashree Kalpathy-Cramer PhD. Computer-based image analysis for diagnosis of retinal disease. This would involve design and/or evaluation of diagnostic algorithms, and comparison to interpretation by human experts. Skills: knowledge of computer programming & database architecture.

Karen Eden, PhD. Seeking interested future graduate student in biomedical informatics. Assist with summarizing results from current evaluation study of women using a mammography decision aid (iPad App). Women with average risk for breast cancer are sent conflicting messages by providers about when to begin mammograms (in their 40's or after age 50). This app is designed to help women understand the medical evidence and make an informed choice. This intern will work with the research team to understand the results and assist in drafting a manuscript. Skills: scientific writing expertise, interpretation, medical literature searching.

Joan Ash, PhD. Assistant needed to update web site. The Provider Order Entry Team (POET) in the Dept. of Medical Informatics and Clinical Epidemiology in the School of Medicine at OHSU has had a web site, www.cpo.e.org, for over a decade, but it is currently out of date. We seek a summer intern with editorial skills and some web development background who can work with us to rejuvenate the site. Requirements: writing and editorial expertise; web development skills (HTML-- knowledge of ColdFusion is also desirable).

David Dorr. MD. TOPMED: A cluster randomized controlled trial to study different approaches to primary care population and care management. The Intern will have the opportunity to review, collate, and summarize results for publication and presentation to various stakeholders. Although there is no precise set of skills necessary, understanding of data presentation and communication of scientific results will be very useful.

David Dorr, MD. Comprehensive Primary Care: The CPC is an initiative to reform primary care to better serve the needs of at-risk populations. The intern will study the milestones, incentive structure, and approach to CPC and work with individual clinics to explain needs and encourage the approach. This position is closely supervised, and will be a great learning opportunity for those who want to understand the transformation ongoing in the health care system. Primary skills are communication and readiness to absorb a good deal of information.

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David Dorr, MD. Integrated Care Coordination Information System : This study, completed 1 year prior, has significant results that are ready to be published. The intern, who should have some understanding of statistics / mathematics and/or measurement approaches, will help to produce manuscripts and abstracts with the results of various study components.

Aaron Cohen, MD. Informatics Discovery Lab : Work directly with a state of the art Electronic Health Record system to understand its function, the research possibilities and the potential collaborations with innovators who want to better inform decision-making at the point of care and across populations. Skills for this position include a general understanding of information systems and/or databases, and how to configure IT. Best matches will include some SQL or other database scripting skills, but not necessary.

Melissa Haendel, PhD and Nicole Vasilevsky. Help develop and record computationally operable content representing mouse behavioral phenotypes that enable comparison with human psychiatric disorders. This will involve review of mouse behavioral data available in GeneWeaver, and relating quantitative data to semantic qualitative behavioral descriptions. We seek a summer intern interested in the biological basis of behavior and either biocuration or Semantic Web technologies (OWL ontologies).

Melissa Haendel, PhD, Robin Champieux, and Nicole Vasilevsky. This project will aim to collect data for a study examining the timing of significant scientific research and publishing events. The goal of this research is to understand the temporal life cycle of traditional research products such as publications and grants and examine questions about variables that may influence this life-cycle. An interest in information science or scientific communication is desired.

Aaron Cohen, MD. Informatics Discovery Lab: The IDL is a dynamic, agile environment in which students, teachers, and researchers collaborate with healthcare organizations and industry partners to drive innovations in healthcare IT. The intern will have the opportunity to help coordinate technical and/or managerial projects; a general understanding of information systems is helpful but not essential, but excellent organizational and communication skills are a must.

Judy Logan, MD. The Clinical Outcomes Research Initiative (CORI) is a research group which studies the use and effectiveness of gastrointestinal endoscopy procedures. CORI created and supports a specialty electronic health record that is used in endoscopy suites across the US. The best use of the CORI endoscopic reporting software depends on workflow within the endoscopy suite. This internship would help complete a study on workflow analysis and would involve collection of time and motion data at several endoscopic sites as well as modeling of the data collected.

Judy Logan, MD. The Clinical Outcomes Research Initiative (CORI) is a research group which studies the use and effectiveness of gastrointestinal endoscopy procedures. CORI created and supports a specialty electronic health record that is used in endoscopy suites across the US. Integration of decision support rules into EHRs can help improve the delivery of care. This internship is to extend the current decision support rules built into the CORI endoscopic reporting software. Some programming skills are required.

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Vishnu Mohan, MD - Help make EHR use safer! Once upon a time, medical records were stored as paper charts and physicians would often have to spend a significant amount of their time looking for the clinician information they needed. Now we use EHRs and physicians are able to access information much more quickly and easily since it is available just a mouse click (or twenty) away. You would think that the EHR would make the process of information retrieval effortless, but instead the very glut of information that helps clinicians make better decisions also results causes new types of errors that can have a significant adverse impact on patient safety. We have been funded by AHRQ to conduct a 3-year project where are employing EHR simulation studies using the Epic EHR system to help improve patient safety. We are helping physicians identify data that is relevant and important to help them make appropriate decisions, particularly those who work in the ICU. The intern for this project will help us in deploying simulations in clinical settings. The intern will also assist with collecting and interpreting study data. The intern should have an interest in clinical health care, EHR simulations and a desire to make healthcare safer for patients.

Vishnu Mohan, MD – Assist teams of clinicians to provide better care for patients! Once upon a time, healthcare delivery was simple – a patient received comprehensive longitudinal care from one physician over an extended period of time [1]. Today, clinicians collaborate with each other and form interdisciplinary teams that provide care for their patients. We have received funding from AAMC and the Donagho Foundation for an innovative project where we will study how interprofessional teams of clinicians (physicians, nurses, pharmacists, etc.) interact with the EHR, identify important and relevant clinical information, and then communicate with each other in way that optimizes patient care. The intern for this project will help us in building clinical cases for simulation, and may participate in data collection. The intern should have an interest in clinical health care, EHR simulations and a desire to make healthcare safer for patients.