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SUMMER 2018: UTHealth-CPRIT UNDERGRADUATE INNOVATION IN CANCER PREVENTION RESEARCH FELLOWSHIP: MENTOR RESEARCH OPPORTUNITY

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Faculty Name Yang Gong, MD, PhD

Phone: Office: 713-500-3547 Cell: 713-796-9628

Faculty E-mail Yang.Gong@uth.tmc.edu

School/Campus School of Biomedical Informatics

Research Projects

Each fellow is expected to spend an average of 40 hours/week on their research project, organized seminars and innovation generation course

Applicants will click on the titles of projects they are interested in to see the description. Give your project an inviting name! Projects that are not funded can also be submitted.

1	Title:		Funding Source:	
		Learning from patient safety events: Identifying and synchronizing Health IT events using deep learning classifier		
Project Description: (100 words max) Think of this as an ad. Students will select projects based on these descriptions.	The positive impacts of Health Information Technology (HIT) include cost savings and improved patient outcomes, decreased occurrence of medication errors, and improved healthcare process measures across diverse settings. However, poorly designed or implemented HIT can pose a risk to patient safety. This project aims to gain a better understanding of the nature of the safety events caused by HIT systems. The trainee will work with an interdisciplinary team and participate in: 1) Identify HIT events from FDA medical device database by using deep learning classifier 2) Synchronize HIT events to a knowledge-based patient safety reporting system for shared learning.			

Contact with: public patients lab samples animals none

NB: Please do not submit more than two projects. Fill out one form per project

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Project Status	IRB	Yes	<input checked="" type="checkbox"/>	No	<input type="checkbox"/>
IRB Number	HSC-SBMI-12-0767				

Laboratory safety protocol	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
Protocol Number				

Will the fellow be added to the protocol? Yes No

Source of fellow funding: CPRIT Training grant Preceptor

If mentor funding, will fellow take part in innovation course, seminars and cancer prevention related research? Yes No

1. End Product(s):

A. All Fellows:

1. Complete a mini project explicitly using the tools of innovative thinking
2. Prepare and present a research poster on their project
3. Participate in the 90-second elevator speech competition for a prize award
4. Write a 3-page reflection paper, describing the summer experience, including instances of applying skills for innovative thinking, and in what way, if any, the experience has affected career plans, goals (due one week before his/her last day)

B. Project specific end products:

Mentors' please specify, e.g., GIS map to track whether and other environmental conditions for day laborer "corners" throughout Houston, design for a social network platform for follow-up with research participants, manuscript on xxx to be submitted for publication, abstract on yyy to be submitted to a scientific meeting

1. Manuscript on identifying health IT events by using deep learning classifier to be submitted for publication
2. Oral presentation about the work at the last week meeting during the 10 weeks
- 3.
- 4.
- 5.

Note to mentors: Any confidentiality agreements regarding the project or data you are using (e.g. unpublished results) should be arranged between you and your fellow.

2. Fellows Activities:

A. All Fellows

1. Complete the Massive Open online Course (MOOC) on Innovation Generation- IMAGINE99x
2. Apply the tools of innovative thinking in a mini-project
3. Participate in 1-hour weekly group meetings and seminars in Houston and via ITV
4. Participate in the elevator speech workshop and feedback sessions

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5. Take part in the mid-course review and brainstorming session on the use of the tools for innovative thinking
6. Provide bi-monthly feedback to the program coordinator
7. Meet with the preceptor weekly to discuss the training experience, progress, and challenges: Day and Time
8. Submit a final review of training experience

B. Project specific trainee activities

Mentors, please specify additional fellow activities, e.g., Fellow will commit to the design, analysis of a mini project XXX as part of a larger project?

1. Attend weekly team meetings
2. Review literature assigned by the preceptor
3. Help to collaborate data, embellish, maintain or update the system server
4. Join in the coding work if necessary
- 5.

3. Learning Objectives: *By the end of the summer experience, fellow will demonstrate that they can*

A. All Fellows:

1. Describe and apply the tools of innovative thinking to increase creativity
2. Describe, in the reflection paper, at least 3 instances of applying one or more tools for innovative thinking
3. Recognize potential conflict(s) of interest in scenarios provided in CITI training
4. Develop interviewing skills for graduate school
5. Develop skills for research poster design and presentation

B. Project specific learning objectives:

Mentors, please specify additional learning objectives, e.g. Fellow will be able to write instructions for low literacy audiences, design a mini project with supervision

1. Familiar with patient safety data
2. Grasp basic skills of literature review
3. Comprehend the basic theories of information retrieval, especially neural network techniques
4. Be able to apply deep learning methods to identify health IT events from FDA Medical device database
- 5.

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4. Are there special fellow characteristics e.g., major, interests, language, culture or other preferences that would be desirable? Please specify:

Note to mentors: Any confidentiality agreements regarding the project or data you are using (e.g. unpublished results) should be arranged between you and your summer fellow.

Highly motivated for patient safety research, demonstrated proficiency in reading healthcare literature, excellent writing and communication skills, basic coding/programming skill in computer is preferred.

5. Mentor Responsibilities

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1. Attend the orientation and the elevator speech competition
 2. Be available for >8 weeks or have suitable substitute
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Will you be out for more than 2 weeks during the training period?

Yes

No

If yes, when would you be gone and for how long?

Who would serve as co-mentor during your absence (name and credentials, please specify)?

Name: Hong Kang, PhD

Job title: Postdoctoral Research Fellow

E-mail: Hong.Kang@uth.tmc.edu

Phone number: office: 713-500-3626

Cell:713-597-9400

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3. Meet with the fellow weekly – progress, challenges...
 4. Encourage the use of the tools for innovative thinking
 5. Notify the project coordinator if the fellow is not meeting the agreed upon responsibilities. (This should be as early as possible to allow problem solving.)
 6. Complete an evaluation of the fellow at the end of the program
 7. Provide feedback on the program experience to the program coordinator
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