Cohort 7 / Spring 2016 UConn IDEA Grant Award Recipients

Individual Projects

Diana Abouchacra '17 (Art – Printmaking, SFA)
Include/Exclude: Explorations of Xenophobia through Printmaking
Mentor: Laurie Sloan, Art & Art History, SFA

- Diana will pursue an art venture that reflects on the effects of the fear of different ethnicities within American culture. She will produce handmade prints depicting life-size human figures; she hopes this work will encourage her audience to contemplate their own preconceptions of "the other."

Saheeb Ahmed '17 (Physiology and Neurobiology, CLAS)
Social and Environmental Factors Influencing Exploration of a Novel Environment
Mentor: Etan Markus, Psychology, CLAS

- Rats explore differently in the presence of another rat. Saheeb will study the effect of various conditions – specifically, anxiety levels and food deprivation – on the exploratory behavior of rat dyads.

Christian Allyn '17 (Horticulture & Resource Economics, CAHNR)
Canaan and Company: Invasive Plant Solutions
Mentor: Joseph Bonelli, Extension, CAHNR

- Invasive plants are a major problem that threatens human health and the environment. There is significant demand for a company to remove invasive plants in Connecticut, and Christian will be developing a company to fill that niche.

Louise Astorino '17 (Art – Painting, SFA)
Raccogliere: The Italian Way of Life
Mentor: Cora Lynn Deibler, Art & Art History, SFA

- Louise will observe and explore the cultural gatherings in Florence, Italy, with the intention of developing a series of studio paintings that communicate the Florentine practice of gathering together in public spaces in the city to savor the time and company of others.

Edward (John) Cody '17 (Puppetry, SFA)
100 Birds
Mentor: Bart Roccoberton, Puppet Arts, SFA

- John will develop and perform *100 Birds*, a whimsical new puppet show that aims to bring laughter and joy to audiences of all ages. When a middle school women's basketball team needs to get to the playoffs, 100 birds come from outer space to help save the day!

Tyler Daddio '18 (Computer Science and Engineering, ENG; Mathematics, CLAS)
Bits4Thought: Engaging and Understandable Computer Science Education for All
Mentor: Ion Mandoiu, Computer Science and Engineering, ENG

- The lack of understandable and engaging computer science education in popular media, paired with the absence of computer science courses in most public schools, has produced a generation of students curious about this field but unable to access good learning resources. Tyler will create a YouTube video series, *Bits4Thought*, to fill this void and bring computer science concepts to the public.

Christine Donat '17 (Physiology and Neurobiology, CLAS)
Understanding Temporal Cue Discrimination in Rats via A1 and cSRAF Auditory Cortical Regions
Mentor: Heather Read, Psychology, CLAS

- The parts of the brain critical for comprehending timing cues in speech vocalizations in human are unknown. Using the rat as an animal model, Christine aims to determine whether neural activity restricted to primary (A1) auditory cortex is critical for discriminating temporal cues in vocalizations.

Joseph Fetta '18 (Nursing, NUR)
Memory Deficit Due to TBI and Concussion in Incoming College Students
Mentor: Angela Starkweather, Nursing, NURS

- Joseph intends to screen the incoming student class for their history of TBI and concussion. Following the screening, he will use established instruments to implement and test a memory enhancing intervention.

Aiden Ford '17 (Physiology and Neurobiology, CLAS; Individualized: Neurodevelopment and Health, CLAS)
Assessing the Distribution of Cortical Projecting Neurons and Dopamine Pathways in the TS2-neo Mouse Model of Timothy Syndrome and Syndromic Autism
Mentors: Joseph LoTurco, Physiology and Neurobiology, CLAS; Holly Fitch, Psychological Sciences, CLAS

- Aiden will perform an immunohistochemical analysis of cortical neuron arrangement in the TS2-neo mouse model of Timothy Syndrome (TS) and syndromic autism, specifically targeting distant and sub-cortical projecting white matter tracts and dopamine pathways.

Ryan Gadea '18 (Biomedical Engineering, ENG)
Low-Profile Assistive Arm Exoskeleton for Patients Suffering from Muscular Atrophy or Dystrophy
Mentor: Kazunori Hoshino, Biomedical Engineering, ENG

- Ryan aims to prototype a soft, low profile, assistive arm exoskeleton for use by a patient with limited strength. The exoskeleton will be controlled via EMG sensors on the user's upper arm, which control a DC motor and a cable to direct force up the user's arm.

Kaitlin Jenkins '17 (Elementary Education, ED; English, CLAS)
Empathy in Young Adult versus Classical Literature: An Analysis of Teachers' Choices
Mentors: Wendy Glenn, Curriculum & Instruction, ED; Victoria Ford-Smith, English, CLAS

- Kaitlin's project will explore teachers' choice of classroom literature (classical versus young adult literature) and the types of empathetic responses they want to elicit from their students. The project comprises an empirical research study, a literary analysis, and an original curriculum guide.

Rebecca Kaufman '18 (Political Science & Human Rights, CLAS)
Examining the Impact of Women in Local Government on Social Programs and Female Empowerment in the Asia-Pacific Region
Mentor: David Richards, Political Science, CLAS, Human Rights Institute

- Rebecca will analyze the policy outcomes and increased female empowerment that may be promulgated by women in local government in the Asia-Pacific region.

Stephanie Koo '17 (English & Biological Sciences, CLAS)
Where My Family Calls Home: A Novel Exploring Chinese Diasporas through Family History
Mentor: Cathy Schlund-Vials, English & Asian American Studies; CLAS

- After investigating her family history and traveling abroad in Malaysia and Singapore, Stephanie will write a novel that discusses the Chinese diaspora and its influence on her family. A website and travelogue will accompany the novel to reach a broader audience.

Stephanie Lin '17 (Psychology & Physiology and Neurobiology, CLAS)
Reframing Music Performance Anxiety as Excitement: Examining Efficacy Using Psychological and Physiological Measures
Mentor: Blair Johnson, Psychology, CLAS
- Stephanie's research study will compare the efficacy of relaxation, excitement, and the power pose in alleviating the psychological and physiological symptoms of music performance anxiety.

Jia (James) Lun '17 (Individualized – Consumer Behavior, CLAS)
From 'C' to 'C': Chinese Cuisine in Connecticut
Mentor: Cathy Schlund-Vials, English & Asian American Studies; CLAS
- James will pursue a multi-phased website project. Composed of four sections and intended for American and international student audiences, the Chinese/English site he will develop will feature a history of Chinese food in the United States, a blog, cuisine tutorials, and time-saving cooking techniques.

Ayush Mittal '17 (Molecular and Cell Biology, CLAS)
Improving Nutrition at the Covenant Soup Kitchen
Mentor: Headley Freake, Nutritional Sciences, CAHNR
- Ayush will collaborate with the staff of the Covenant Soup Kitchen to expand the availability of healthy meals for patrons of the soup kitchen.

Charmi Patel '18 (Biomedical Engineering, ENG)
Microscope Integrable Robotic Automated Arm (MIRAA)
Mentor: Guoan Zheng, Biomedical Engineering, ENG
- Charmi aims to develop a highly functional and efficient integrated robotic arm that can be utilized in conjunction with the InstantScope (Whole Slide Imaging platform) or independently on a standard microscope.

Delaina Pedrick '17 (Biomedical Engineering, ENG)
3D Printing of a Nerve Conduit
Mentor: Yen-Chih Huang, Biomedical Engineering, ENG
- The goal of Delaina's project is to 3D print a mixture of poly(glycerol dodecandioate co-fumarate) (PGDF) and beeswax as a synthetic nerve conduit for the treatment of peripheral nerve injury. The properties of the conduit will be evaluated by ASTM force testing standards and in vitro cell culture.

Benjamin Piascik '17 (Digital Media and Design, SFA)
BiTown: The Pilot
Mentor: Dan Pejril, Digital Media and Design, SFA
- Benjamin will write and produce the pilot episode for *BiTown*, a workplace comedy television show centered on the employees of a grocery store. The show will examine the relationships between coworkers as well as the relationship between customers and employees.

Catherine Solari '17 (Art – Sculpture and Ceramic Art, SFA)
One-to-One Mapping Translations
Mentor: Monica Bock, Art & Art History, SFA
- Catherine will create a body of work that deals with translating found objects and patterns into a readable map-like representation through the process of one-to-one mapping.

Agnieszka Weber '17 (Psychology, CLAS)
Developing an Intergenerational Program in Stamford, CT
Mentor: Jerome Sehulster, Psychology, CLAS
- Agnes will research successful intergenerational program models that bring senior citizens and young children together and design such a program for implementation in Stamford, CT.

Group Projects

Divya Ganugapati '18 (Cognitive Science, CLAS)
Lysette Johnson '18 (Applied Mathematics, CLAS)
Feny Rasania '18 (Pathobiology, CAHNR)
Katherine Sypher '19 (Cognitive Science, CLAS)
STEMTalk Magazine
Mentor: Kristen Govoni, Animal Science, CAHNR

- Divya, Lysette, Feny, and Katherine will launch STEMTalk, a student-run magazine on campus that will report on current news, opinions, research, and opportunities in the fields of science, technology, engineering, mathematics, and medicine.

Colin Gerrity '17 (Chemical Engineering, ENG)
Jacob Struble '17 (Chemical Engineering, ENG)
Development of a Flow Process to Defluoridate Water Using Natural Zeolites
Mentor: Julia Valla, Chemical Engineering, ENG

- Research has shown that naturally occurring zeolites in Ethiopia are effective at removing fluoride from drinking water. As excessive fluoride levels can be fatal, Colin and Jacob plan to develop a prototype for a flow process that can reduce fluoride content in groundwater to levels safe for consumption.

Alexa Kiernan '18 (Biomedical Engineering, ENG)
Emily Wycallis '18 (Biomedical Engineering, ENG)
The Effect of the High Intensity CrossFit Workout on the Knee Joint
Mentor: Krystyna Gielo-Perczak, Biomedical Engineering, ENG

- Alexa and Emily will use motion analysis technology to examine the longitudinal effects of CrossFit workout regimens on the knee joint.

<u>**Declined Awards**</u>
Stephen Bogdan '17 (Communications, CLAS)
Charles Smart '18 (Journalism & Political Science, CLAS)
Hope: A Documentary Film About the Iconic Poster that Became a Copyright Law Landmark (Award Declined)

Ryan Cordier '18 (Materials Science and Engineering, ENG)
Amisha Dave '18 (Biomedical Engineering, ENG)
Elizabeth Pouya '17 (Physiology and Neurobiology, CLAS)
Protectiscope (Award Declined)

Hamsa Ganapathi '17 (Chemistry, CLAS)
Analyzing Population Health Literacy in Healthcare Insurance Vernacular as a Means to Assess Healthcare Development Effectiveness (Award Declined)