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2020 LEEP Fellows

Melanie Adams '22, Psychology: *The Empower Yoga Project*
Melanie used her LEEP Fellowship to become certified in the Trauma-Conscious Yoga Method to serve her students with accessible, trauma-sensitive yoga classes online. She supplemented this learning with digital workshops and self-directed study related to trauma and mental health, managing pandemic-related stressors, alleviating depression with yoga, and enhancing body image. Throughout the summer, she chronicled and promoted the project on Instagram, and at its conclusion, presented a write-up at Winter Fest. These educational experiences aimed to holistically create an Empower Yoga Project to bring high-quality, accessible yoga education to anyone in need throughout quarantine.

Kaitlyn Anderson '21, Philosophy: *Building curriculums for a summer arts academy in order to improve school readiness*
Over the summer, Kaitlyn built and implemented art curriculums for a class of students identified as refugees, ranging from 13-15 years old, who were participating in a summer academy to increase their level of school readiness. She remotely instructed four art courses per week that used dance, improvisation, theater and storytelling to focus on a series of themes, including identity, emotions, and the importance of arts education as a tool of expression. She also worked alongside Artists Striving to End Poverty, an organization based in NYC, and is now bringing her art curriculum and experience to her fifth year in Community Development, where she hopes to focus on arts education in Worcester.

Lilah Feitner '22, Media, Culture, and the Arts: *The Upcycled Mentality*
Sustainability in the fashion industry is slowly becoming incorporated, yet many companies view it as a burden on creativity, production, and sourcing. Lilah's project focused on this issue of sustainability through research into the upcycling practice as a method of sustainable production. For her LEEP Project, she produced two podcasts: one involving her research into the clothing industry, their attempts to incorporate sustainable practices, and interviews with local businesses and artists who have successfully positioned upcycling at the core of their business model, and the second documenting her own experience of production and design, and the challenges and benefits of upcycled production.

Anisha Hassan '21, Psychology: *Mental Health of Emerging Adults in India*
Anisha's personal research project focused on 'Mental Health of Emerging Adults in India'. There is a distinct lack of research on emerging adulthood about people outside the United States

and Europe. Emerging adulthood is a stage of life from age 18 to 29-year-old. These people do not have the traditional markers of adulthood such as marriage and parenthood but spend this time to go through exploration and identity development. Anisha used the data collected by Professor Mitra to conduct both quantitative and qualitative data analysis and literature review to write a 15-page research paper.

Brett Iarrobino '21, Theater Arts & English: *Virtual Sessions, Victorious Students: Online Education & Artistic Expression for Refugee Families*
As a virtual teacher with the Worcester Refugee Assistance Project, Brett cultivated a dynamic, excitable curriculum for his students and provided refugee families with consistent engagement, seizing on his extensive history with youth work to provide personalized English lessons strengthening reading and writing competency. He utilized his background in arts education to create lessons provided young people with the opportunity to voice their own thoughts regarding their brave new world and allowing them to grapple creatively with their unique positionality as refugees living through an unprecedented situation.

Mikey Ippolito '21, History & Spanish: *We're Still Here: Embracing Working-Class History in a Gentrifying Town*
Over the summer, Mikey developed, edited and distributed a collaborative public history zine to tell the little-spoken stories of Portsmouth, NH's working class, past and present. The project aimed to resist gentrification by establishing a mutually educational public discourse, demystifying Portsmouth history through accessible language. Each issue included an editorial feature article, written by Mikey, based on extensive secondary research, as well as a variety of contributions from members of the Portsmouth community. The zine was intended as a space to celebrate and remember the town's cultural heritage, to mourn that which has been lost or made invisible, and to strive towards a better future through art, ideas, and community support.

Adeline Hebert and Kathryn Jeffreys '23, Undeclared/Exploratory: *Clark University's Climate Action and Resilience Plan*
Kathryn and Adeline's LEEP Project was inspired by their passion for climate and environmental justice. The pair spent ten weeks creating a proposal to incoming President Fithian, advocating for Clark University to sign on to Second Nature's Climate Commitment and recommending solutions to the challenges of Clark's Climate Action Plan. This proposal laid out a long-term vision and strategy for Clark to reach carbon neutrality and develop community resilience, while also supporting incoming President Fithian in the development of the University's ongoing climate strategy.

Isaac Khor '21, Computer Science & Mathematics: *Using neural networks to predict formation via headward erosion*
Isaac used machine learning to research and develop a model to predict the evolution of soil erosion. He was motivated by the scientific and practical importance of predicting the course of above- and underground river systems, where observational capabilities are limited, which significantly impact urban planning and the preservation and maintenance of natural ecosystems. The final product of Isaac's project was a model that can be used to predict the future course of water and other analogous systems whereby erosion plays a major role in their development over time.

Emily Maynard '21, Biology & Studio Art: *Ant and Rodent Seed Preference*
Emily spent her summer collecting and analyzing data from previous experiments to find how ant and rodent preference differs based on seeds from different species and habitat origins. As woody seeds increasingly encroach on grasslands, it will be important to the fields of behavioral ecology and conservation to understand how ant mutualist and rodent antagonists will affect woody dispersal. Emily presented a poster on the project at Winter Fest and wrote a paper describing her findings to aid another master's student's thesis.

Isaac Nugent-Faverman '21, Biology: *Editing the Dictyostelium discoideum with CRISPR Cas9*
Recent papers showing that it is possible to use CRISPR Cas9 in Dictyostelium discoideum inspired Isaac's LEEP Project. Dictyostelium discoideum is a species of soil-dwelling amoeba, also known as slime mold, that has multiple mechanisms for gene repair. Isaac's project used CRISPR Cas9 to introduce mutations and new sequences by utilizing NHEJ and HDR, two double-stranded break repair mechanisms. This furthered study for both the Clark University biology department and other researchers wishing to manipulate the D. discoideum genome.

Luke Pound '22, Psychology: *Perceiving Etymology: Impact of Word Origin on Stereotype Formation*
Luke's project studied the relationship between the etymology of someone's vocabulary and the stereotypes that are formed as a result of their word choice. The research, in the form of an anonymous online survey, is a continuation of Luke's previous research in an attempt to fill in a gap in the existing literature on psycholinguistics. He completed the project with a research paper to submit to relevant academic journals in order to make a meaningful contribution to the literature.

Naveed Sattar '23, Computer Science: *Target-Aware Dwell (aka Predictive Link Following)*
Naveed's summer project aimed to develop and evaluate a program that allows people with motor impairments to make use of mouse replacement interfaces. Programming was done on Spyder 3.0, using Python. Naveed chose this project to help develop something that benefits

others and introduce him to an abundance of practical implementations of computer science related concepts. He also gained valuable experiences in how a constantly growing field of study functions. The project resulted in a paper presenting his findings and working prototype.

Jamie Yeo and Violet Blue, '22, Computer Science: *Coding Youth (Project CODY): Worcester Computer Science Outreach*
Project CODY was initiated by Clark computer science faculty for the purpose of 1) reaching out to teach computer science Worcester youth during the summer months while their normal activities were disrupted due to the pandemic, and 2) engaging and utilizing Clark computer science students whose internship and job opportunities were lost to the pandemic. Jamie and Violet both taught and mentored online, creating computer science oriented online communities for several four-week sessions. Programs included computational problem solving, web development, game coding, animation, and data security.

Aandishah Samara '21, Environmental Science: *Timeseries analysis of seasonal variations Pacific Arctic Sea Ice-Cloud Cover Feedback*
Aandishah's project utilized TerrSet's Earth Trends Modeler to look at dynamics between Sea Ice and Cloud Cover. Her goal was to analyze existing data from the Distributed Biological Observatory (DBO) to create a time series for the Sea Ice melting and cloud cover patterns for the northern Bering Sea to the boundary of the Chukchi and Beaufort seas. The project concluded with the beginnings of a published paper in collaboration with Professor Frey that will give better insight into the sea ice-cloud dynamics systems for scientists modeling climates.

Cat Mai '22, Mathematics & Computer Science: *Characterization and Analysis of Social Media Campaigns: A Case Study of #TeamTrees*
Cat's LEEP Project focused on the #TeamTrees social media campaign as a case study. #TeamTrees was a year-long 2019 initiative that managed to raise 20 million U.S. dollars before 2020 to plant 20 million trees. Cat aimed to categorize and analyze quantitative and qualitative metrics of TeamTrees-related YouTube videos to assist with characterization and modeling of audience's preferences. The project resulted in better understanding of which metrics contribute to a campaign's virality and their mechanism and effectiveness toward different audience groups.