

Cedric Vicera

vicera@seas.upenn.edu | www.cedricvicera.com

EDUCATION

University of Pennsylvania

Expected May 2022

Master's in Computer Science (MCIT)

University of Arizona

May 2020

B.A. in Philosophy with Honors

PROFESSIONAL EXPERIENCE

St. Jude Children's Research Hospital

May 2021 – July 2021

Biostatistics Research Intern

Remote

- Wrangled pediatric oncology patient health records to visualize several average temporal trends in patient BMI based on presence vs. absence of bacteria species pair.
- Utilized R to apply a linear mixed-effects model to identify 3 bacteria species pairs correlated with elevated post-treatment BMI.
- Presented results in a research seminar and wrote a draft manuscript detailing project methods and discussion.

Computational Medicine and Informatics Collaboratory

Aug 2018 – May 2020

Research Assistant

Tucson, AZ

- Wrote scripts in Python/pandas and R to extract critical care telemedicine data to analyze noninvasive ventilation failure rates and temporal differences between noninvasive strategies of 10K+ patients.
- Visualized 9 patient subgroup outcomes by generating Sankey diagrams.
- Applied logistic regression to show that mortality rates for failure are disproportionately higher for NIPPV patients with an increase of 16.8% in mortality compared to HFNI patients, which carry a 6.6% increase in mortality.

TECHNICAL SKILLS

Languages Python, R, Java, C, HTML, \LaTeX

Libraries pandas, NumPy, scikit-learn, Matplotlib, Seaborn

Tools/Technologies Git, Jupyter, RStudio

PROJECTS

COVID-19 Risk Factor Predictor | *Python, Flask, HTML/CSS/JavaScript, Git*

Jan 2021

- Developed a full-stack web application to display an analysis of identified COVID-19 risk factors for a user.
- Implemented front-end and back-end services using Flask/Python in conjunction with HTML/CSS/JavaScript.
- Conducted data analysis in Python/pandas by leveraging CDC COVID-19 Case Surveillance Public Use Data to compute user results.

PUBLICATIONS

P. Essay, **C. Vicera**, J. Mosier, V. Subbian. Analysis of Acute Respiratory Failure Patient Noninvasive Ventilation Therapy. *American Thoracic Society International Conference*. 2020.

C. Vicera. Persona Identification in Tele-ICU Data of Mechanically Ventilated Patients. *UROC Abstract Review*. 2019.

PRESENTATIONS

The Effect of the Gut Microbiome on Obesity in Survivors of Childhood Cancer

July 2021

- *POE Lunch & Learn Series* - St. Jude Children's Research Hospital

Phenotyping of Mechanically Ventilated Patients in the ICU

August 2019

- *UROC Summer Colloquium* - University of Arizona

Persona Identification in Tele-ICU Data of Mechanically Ventilated Patients (Poster)

August 2019

- *24th Annual UROC Research Conference* - University of Arizona