

Cedric Vicera

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EDUCATION

University of Pennsylvania
Master's in Computer Science (MCIT)

Expected May 2023

University of Arizona
B.A. in Philosophy with Honors

May 2020

TECHNICAL SKILLS

Languages Python, R, SQL, Java, C, HTML
Technologies pandas, NumPy, Scikit-learn, Matplotlib, Seaborn
Tools Git, Jupyter, PyCharm, RStudio

PROFESSIONAL EXPERIENCE

St. Jude Children's Research Hospital
Biostatistics Research Intern

May 2021 – July 2021
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.
- Implemented a linear mixed-effects model in R 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
Research Assistant

Aug 2018 – May 2020
Tucson, AZ

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

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

July 2021

Phenotyping of Mechanically Ventilated Patients in the ICU
• *UROC Summer Colloquium* - University of Arizona

August 2019

Persona Identification in Tele-ICU Data of Mechanically Ventilated Patients (Poster)
• *24th Annual UROC Research Conference* - University of Arizona

August 2019