john.kevin.cava@gmail.com   **John Kevin Lopez Cava**   Website: johncava.github.io

Education

Arizona State University, Tempe AZ   Aug 2020 - Present
Ira Fulton Schools of Engineering: *PhD, Computer Science*

Arizona State University, Tempe AZ   **GPA: 3.22**
Ira Fulton Schools of Engineering: *Bachelors of Science, Computer Science*
College of Liberal Arts and Sciences: *Bachelors of Science, Molecular Biosciences & Biotechnology*
                                                                  Bachelors of Science, Mathematics
Graduation Date: May 2018

Research Experience

Arizona State University, Tempe AZ   **January 2020 - Present**
Graduate Research, Advisor: Lalitha Sankar
● Conduct deep learning experiments on novel loss functions

Arizona State University, Tempe AZ   **August 2018 – Dec 2019**
Graduate Research, Efficient Vehicles & Sustainable Transportation
● Collected and Aligned LiDAR and Camera data
    ○ ~ 30 hours of pedestrian LiDAR Data
    ○ ~ 2.5 hours of aligned LiDAR and varying focal length camera data
● Designed and developed deep learning models for distance estimation from camera data

Arizona State University, Tempe AZ   **August 2017 – May 2018**
Undergraduate Research Assistant/ Graduate Research, Biodesign
● Handling with Terabytes of Microbe Data for Network Analysis
● Utilize programs and programming to analyze data within ASU Research Computing Cluster (Saguaro)

Work Experience

American Express, Deer Valley AZ   **June 2017 – August 2017**
Software Engineer III Intern, ITSM Suite Development & Integration
● Designed, Implemented, and Documented ITSM API endpoints within Apigee for Internal American Express Customers (Departments)
● Tested API endpoints through SoapUI and Postman
● Developed basic MEAN stack applications and hosted them in American Express servers

American Express, Desert Ridge AZ   **June 2016 – August 2016**
Software Engineer III Intern, Employee and Communications Technology
● Designed and implemented a web application that retrieves relationships from a graph database (Neo4j) and visualizes said relationships within a graphical user interface (Javascript and AngularJS Framework)
● Implemented a Java program that imports American Express' data about its internal applications and technologies into a graph database.

Skills

Languages: Python, Java, Javascript
Libraries: pyTorch, sci-kit learn, matplotlib, pandas

Related Experiences

Arizona State University, Tempe AZ   **August 2017 – December 2017**
Undergraduate TA, CSE 471 Introduction to Artificial Intelligence
● Undergraduate TA for a class that I took during Sophomore year of University.
● Holding office hours and answer questions in online forums to help AI projects which are done in python

Leadership

Venue Coordinator, *SWHacks*   **2016 - 2017**
● Plan and organize the venue operations for SWHacks - a hackathon - which will be held at Arizona State University (Spring 2017)
Director of Operations, *Software Developers Association (SoDA) (Website: http://thesoda.io/)*   **2016 - 2017**
● Oversee all logistics and operations for SoDA (i.e, room reservations, food for events, or anything that the organization needs to operate)
Events Planning Committee Lead, *Software Developers Association (SoDA)*   **2016 - 2017**
● Manage and schedule meetings between other officers under the Events Planning Committee to schedule the organization's events for each semester
University Outreach Chair, *Software Developers Association (SoDA)*   **2015 - 2016**
● Managed communications between university professors and other student organizations with SoDA.

Publications and Preprints

● Gupta, Chitrak, **John Kevin Cava**, Daipayan Sarkar, Eric A. Wilson, John Vant, Steven Murray, Abhishek Singharoy, and Shubhra Kanti Karmaker. "Mind reading of the proteins: Deep-learning to forecast molecular dynamics." *bioRxiv* (2020).
● **John Kevin Cava**, Todd Houghton, Hongbin Yu. Towards Generalizable Distance Estimation By Leveraging Graph Information. *Proceedings of the IEEE International Conference on Computer Vision Workshops 2019*.
● **John Kevin Cava**, Gaoyang Li, Wei Du, Huansheng Cao. WITOD: A Tool for Within-Taxon Operational Taxonomic Unit Diversity Analysis. *bioRxiv, 813444*