

Bonaventure Raj

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Education

University of North Carolina at Charlotte

B.S. IN COMPUTER SCIENCE

- Minor : Mathematics - Concentration : Data Science
- Cumulative GPA: 3.95/4.0

Charlotte, NC

Aug. 2017 - Dec. 2020

Skills

Programming Languages Python, Java , C/C++, HTML/CSS, MySQL, R

Software Tools and Skills iPython, Numpy, Pandas, AWS, Relational Databases, RESTful API's

Work Experience

Phylomics Diagnostics

PART-TIME SOFTWARE ENGINEER

Georgetown, Washington D.C

December. 2020 - Current

- Early cancer detection startup company based in Halycon Incubator @ Georgetown University.
- Working on creating a web application to collect metabolomic, proteomic, and DNA microarray based data forms to process the cancer classification model and display the pertinent phylogenetic tree according to patient data.
- Built the entire back-end/cloud infrastructure for data collection.

Fidelity Investments Inc.

DATA ENGINEER INTERN

Durham, NC

May. 2019 - Aug. 2019

- Developed and enhanced a conversational bot that provides fund/investment operational data for internal and external clients using AWS tools and NLP.
- Efficiently queried and parsed data from multiple fund and performance databases to return information using web mining techniques.
- Development via Agile methodology. Presented to multiple upper management and clients in different organizational groups.

Data Structures & Algorithms Teaching Assistant

UNC CHARLOTTE DEPARTMENT OF COMPUTER SCIENCE

Charlotte, NC

Dec. 2018 - Dec. 2019

- Teach Data Structures and time complexity pertaining to algorithms in Java to a class of 126.

Research and Projects

Undergraduate Research - Augmented Reality for Patient Information Analysis

UNC CHARLOTTE, PU WANG RESEARCH LAB

Charlotte, NC

Dec. 2019 - Current

- Work with Enterprise Google Glasses-2 and Moverio Epson BT-300 AR systems to alleviate critical mistakes in patient and dosage administration.
- Created an optical character recognition model to recognize information on medical bottles and display relevant dosage and type information on the AR device.
- Working on using federated learning for local model influencing of facial classification/detection, OCR, NLP, and syringe detection/classification.

Undergraduate Research - Graph Based IoT Bus Arrival & Departure Analysis

UNC CHARLOTTE, DORODCHI RESEARCH LAB

Charlotte, NC

Aug. 2019 - Dec. 2019

- Quantitatively analyzed arrival and departure times of UNC Charlotte buses to reduce error within forecasted arrival times using IoT.
- Examined current bus routes during peak traffic intervals to determine significant paths using shortest path algorithms and related Graph Theory.

Undergraduate Research - Integrated Analytics Parking Deck

UNC CHARLOTTE, DORODCHI RESEARCH LAB

Charlotte, NC

Aug. 2017 - Aug 2018

- Initiated an IoT research project using raspberry pi's to collect, store, and analyze traffic severity data in parking decks at UNC Charlotte.
- Analysis of traffic flow using several Python libraries and a Multilayer Perceptron Neural Network Machine Learning Model to find future traffic occurrences.

Extracurricular Activities

Charlotte Analytics Club

FOUNDER & PRESIDENT

Charlotte, NC

Jan. 2019 - Current

- Lead weekly meetings to teach data visualization, analysis, and predictive modeling using Python and R.
- Lead and instruct real data analysis projects for the university.