

Bhuvaneshwar Mohan

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SUMMARY

Creative and involved graduate computer scientist experienced in the fields of AI, Machine Learning, Deep Learning, Data Science and Computer Vision. Seeking internship or co-op opportunities for Spring'22, Summer'22 and beyond.

EDUCATION

M.S Computer Science GPA: 3.3 (First Semester)

Expected May 2023

Arizona State University, Tempe, AZ

B.S Computer Science (Minor: Mathematics) GPA: 3.2

May 2021

Southern Illinois University, Edwardsville, Illinois

Relevant Coursework: Artificial Intelligence, Machine Learning, Deep learning, Data Mining, Statistics, Algorithms, Data Structures

TECHNICAL SKILLS

Programming Languages: Python, R, C++, Java, SQL, C, Julia

Frameworks & Libraries: Keras, TensorFlow, PyTorch, PyBullet, Brax, Apache Spark, Scikit-learn, SciPy, Pandas, NumPy, OpenCV

Cloud Services, OS & DBMS: Amazon Web Services, Google Cloud, Windows, MacOS, Linux/Unix, PostgreSQL, Firebase

Concepts: Classification, Regression, Clustering, Scalable & Distributed Machine Learning, Reinforcement Learning, Machine Vision

WORK EXPERIENCE

Decision Theatre Network at Arizona State University, Tempe, AZ: Data Analyst (on-campus/part-time) Starting 10/2021

- Using **Data Science** to aid decision making in important areas of society such as education, resiliency, security, and health

Southern Illinois University, Edwardsville, IL: Aide for Human Genomic Big Data Research

08/2019 - 08/2021

- Processed large data sets containing patients' genetic data using **Python**
- Wrote **Python** scripts to construct a **PostgreSQL** database to house the information present in six spreadsheets containing over 20,000 records each
- Wrote **Python** scripts for easy retrieval of data from the database
- Managed two **Linux-based** elastic cloud servers, one on **Google Cloud**, and one on **Amazon Web Services**
- Aided in **statistical** and **machine learning** analysis of the data using techniques such as **Clustering** and **PCA**.
- Trained fellow researchers on how to manage the cloud servers and database

ACADEMIC EXPERIENCE

Southern Illinois University, Edwardsville, IL: Research – Preserving Homophilies in Network Scale Up 08/2020 - 05/2021

- Explored techniques to scale up small networks while preserving homophilies to study transfer of HIV within communities
- Wrote **Python** Scripts to generate sample networks based on the SATHCAP dataset using libraries such as **Pandas**, **NumPy** and **NetworkX**
- Performed **statistical** analysis of data to facilitate feature curation which was then used to describe our methods of scaling up the network

Paper "**Preserving Multiple Homophilies in a Network Configuration Model**" published by IEEE EMBC'21

Southern Illinois University, Edwardsville, IL: Research – Identifying Biomarkers of High-Risk Nodes 01/2020 - 05/2020

- Used Python libraries such as **NetworkX**, **Pandas** and **NumPy** to visualize the various network components of the SATHCAP dataset from the different regions surveyed
- Tracked the spread of HIV within large communities, primarily in Chicago based on high-betweenness and bridge nodes
- Wrote **Python** scripts for feature curation to identify the primary societal and lifestyle factors affecting spread of HIV such as homelessness, education, and drug use

Paper "**Identifying Biomarkers for Important Nodes in Networks of Sexual and Drug Activity**" published in *Complex Networks & Their Applications IX Vol.1*

RELEVANT PROJECTS

Parkour Spot ID – Feature Matching in Satellite and Street View images using Deep Learning

Fall 2021

- Designed a **CNN** based model that can classify satellite image using **Tensorflow**
- Developed a **Mask RCNN** segmentation model to identify objects of interest in street view images using **Tensorflow**
- Recognized potential parkour spots within Tempe, AZ with an accuracy of 80% using an ensemble of the models

Terraform AI Solutions

Spring 2021

- Built a **classification model** using **AWS Sagemaker's Object2Vec algorithm** to recommend Terraform resource elements based on existing resources in Terraform configuration files
- Demonstrated how similar models can be built for other terraform configuration elements