ASHWIN VISWANATHAN

DATA SCIENTIST | ML RESEARCHER

ashwin.kannan@okstate.edu

405-385-3823

Ashwin LinkedIn

https://github.com/ashwin4ever

https://ashwin4ever.github.io/

KEY SKILLS

Machine Learning
scikit-learn, numpy, pandas, Tensorflow, opencv, spacy, nltk, Neural Networks, XGBoost, Spiking Neural Networks, Natural Language Processing

Statistics
Data cleansing, Exploratory Data Analysis, Hypothesis Testing, Resampling, Feature Extraction

Programming
Python, R, Java, Processing 3.x

Database Programming
SQL, PL/SQL, MySQL, PostgreSQL

Web Programming
HTML, D3.js

Big Data
Apache Spark, Hadoop

ETL / Business Intelligence
IBM DataStage, Pentaho Data Integration, Informatica

Other
Unix, Shell Scripting, Git

EDUCATION

PhD. Computer Science Dec 2021
Oklahoma State University

MS. Computer Science Dec 2018
Oklahoma State University

B.Eng. Computer Science May 2010
Anna University

AWARDS & HONORS

Awarded top tier merit scholarship of $5000

Selected as both student and mentor in the competitive Neuromatch academy bootcamp on machine learning and computational neuroscience

DATA SCIENCE PROJECTS

Data Analysis & Visualization – HR Analysis Case Study

Contributed Python notebook to Kaggle performing a detailed end to end Exploratory Data Analysis and Visualization.

Predicting Airfoil Sound pressure using TensorFlow

Developed a Machine Learning model to predict the sound pressure in decibels from different sizes of NACA 0012 airfoils at various wind tunnel speeds and angles of attack.

Detecting Peanut Flowers in a Peanut farm

Built a Machine Learning model to detect and count peanut flowers in a peanut bush to avoid manual counting by farmers.

Diagnosing Post Traumatic Stress Disorder (PTSD)

Received **$250** cash prize and **RIATA Rising Star award** for developing PTSD diagnosing model using Machine Learning

DATA SCIENCE EXPERIENCE

Koch Industries Inc. **Summer 2020**
Data Scientist Intern Wichita, KS

- Helped **identify** reliable parts suppliers by implementing Text Analytical models in Python that extracts key terms from repair logs.
- Used **Neo4j** – a graph database to develop data models for **faster retrieval** of data
- **Developed** data processing and cleaning scripts using Python to be used across machine learning projects within Koch.

Dell Inc. **Summer 2018**
Data Scientist Intern Texas, USA

- Developed machine learning model that advises planners on whether a replenishment order for low volume part should be approved/rejected to **minimize** excess.
- **Improved** excess avoidance through machine learning by **45%**
- **Enhanced** the planner review process by **balancing** Excess & Customer Experience

OSU BAE & USDA **Fall 2017**
Image Processing & Database Intern OK, USA

- Used Computer Vision algorithms to **detect** peanut flowers in peanut grass farm
- Wrote code to **interface** Microsoft Kinect mounted on a **RC cart** to **capture** images of peanut grass.
- Implemented Image Stitching to create a panorama image of rows of peanut bushes to algorithmically identify the width and efficacy of fertilizers.
- Configured and installed **LAMP** (Linux Apache MySQL and PHP) stack for hosting a webserver.

ML RESEARCH EXPERIENCE

OSU Computer Science **2015 – 2021**
PhD. CS OK, USA

- Published 2 first author and 3 second author conference papers in peer reviewed conference publications.
- Invited as reviewer for IEEE Symposium Series on Computational Intelligence – 2020 & 2021
- Experienced in building and integrating Machine Learning with Bio-physical neuron models using Spiking Neuron Networks as part of core PhD research concentration.
- Developed a Machine Learning model based on saccadic eye movements of mice to understand how various brain regions function in terms of decision making.

DATA ENGINEERING EXPERIENCE

Cognizant Technology Solutions **2010 – 2015**
Associate – Data Engineering Chennai, India

- Extensively involved in technical and business discussion with various portfolio owners on understanding the business requirements.
- Implemented data models **improving** data transformation and loading routines resulting in **faster** and **efficient** retrieval of key business metrics
- Conducted **several training sessions** for new hires and experienced developers on **efficient** Data Engineering practices