(530) 979-3398
bsundararajan@ucdavis.edu

BHARGAV SUNDARARAJAN

bhargavsundararajan.github.io

EDUCATION

University of California, Davis **Davis, CA** **Sept 2018 – March 2020 (Expected)**

- Master's in Computer Science, **GPA: 3.80**
- **Graduate Coursework:** Machine Learning, Visual Recognition, Advanced Operating Systems, Software Engineering, Distributed Database Systems

SRM University **Chennai, India** **June 2014 – May 2018**

- Bachelor's in Computer Science and Engineering, **GPA: 3.56**
- **Undergraduate Coursework:** Data Mining, Data Structures and Algorithm Design, Database Management Systems, Operating Systems

EXPERIENCE

Graduate Student Researcher **UC Davis** **June 2019 – Present**

- Responsible for building Deep Learning Models for ARDS Disease detection using Ventilator Waveform Data of 100 ICU patients.
- Improved the accuracy of the previous model by 10% by integrating the DenseNet Architecture in place of the ResNet Architecture.
- Successfully implemented the GradCAM Visualization technique to gain insight into the working of the trained model.

Product Engineer Intern **Volante Software Pvt Ltd., India** **April 2017 - June 2017**

- Designed and developed Enterprise Integration Patterns for mapping Financial Messages of 100+ formats.
- Performed Integration & Deployment of these services on frameworks such as Apache Camel, Mule, Spring and cloud containers such as Apache Tomcat and IBM Bluemix.

SKILLS

- **Languages:** Python, C/C++, R, Java, JavaScript, MySQL, HTML/CSS
- **Libraries:** PyTorch, TensorFlow, Ski-kit Learn, Pandas, NumPy, Matplotlib, Node.js, D3.js
- **Tools:** Git, Tableau, R Studio, Eclipse, Spring, Docker

ACADEMIC PROJECTS

DeepARDS (Team):

- Designed an 18-layer Deep Learning Model using a combination of DenseNet and LSTM architectures for ARDS disease detection using Ventilator Waveform data of 100 ICU patients.
- The model achieved an Accuracy of 81% and AUC score of 0.95.
- Language and Libraries used: **Python 2.7, PyTorch, Pandas, Matplotlib**

Phishing URL Detection (Team):

- Developed a Recurrent Neural Network with 3 hidden layers using the Recurrent Weighted Average algorithm to detect Phishing URLs.
- The model achieved an Accuracy of 98.6%.
- Language and Libraries used: **Python 3.4, TensorFlow, Pandas, NumPy, Tkinter**

Atari Learner:

- Implemented the Q-Learning algorithm to help a computer learn to play Atari video game.
- The trained model was successful in achieving the highest reward of 21 points in a session.
- Language and Libraries used: **Python 3.4, PyTorch, Gym, Pandas, NumPy, Matplotlib**

BACKpackers (Team):

- Engineered a Peer-to-Peer Backup system using Socket Programming and Multi-Threading to backup important files on LAN.
- Language and Libraries used: **Python 3.7, Socket, thread**

NPM Package Analysis:

- Conducted Qualitative and Statistical analysis of 1000 npm packages such as counting the number of Trivial Packages, Time Lag of Dependencies, Dependency Tree and Statistical Tests using r2c analyzer.
- Language and Libraries used: **Nodejs, Python, R programming, r2c analyzer**

ADDITIONAL EXPERIENCE AND AWARDS

- Recipient of the **UC Davis Graduate Student Involvement Award** in 2019.
- Volunteer at U&I Teach, India (Sept 2017 - April 2018).