Ravi Kiran S

1/200 Vasudevan Street, Jawaharlal Nagar, Redhills, Chennai-52 | sravikiran0606@gmail.com,www.sravikiran.com | 8056131962

EDUCATION

B.E. in Computer Science *(Among top 5% out of 180 students)*

Anna University - CEG Campus	CGPA- 9.45/10	**Apr 2019***
12th grade, Velammal Matric HSS, Surapet	97.08%	**Apr 2015**
10th grade, Velammal Matric HSS, Surapet	98.60%	**Apr 2013**

RESEARCH INTERESTS - Data Science, Machine Learning, Deep Learning, Natural Language Processing
COURSEWORK TAKEN - Big Data Analytics, Machine Learning, Artificial Intelligence

INTERNSHIPS

***Data Science Intern,* Motorq** **Dec 2018 - till date**

- Analysing large-scale connected car data from IoT devices and solving problems such as refueling event detection, idling time detecting, trip completion event detection, predictive maintenance of automobiles etc.

***Machine Learning Intern,* Kenome Technologies** **May 2018 - Jun 2018**

- Learnt about Deep Learning and TensorFlow model implementation using AWS Cloud instances

Entity Tagger

Built a deep learning model to perform sequence tagging for colors, materials and patterns in text documents

- Built a method for data-annotation by reducing time complexity of string matching from naive algorithm {O(n*m) to O(n)} using a modified version of Trie data structure (n = length of all sentences & m = no. of tags)
- Observed a maximum F1 score of 0.94 for tagging colors and materials in testing data set

Crypto-currency Prediction

- Built a dashboard to visualize the crypto-currency prediction model using Plotly and d3 libraries

***Software Development Engineer Intern*, Amazon** **May 2017- Jul 2017**

- Learnt about software development lifecycle, software design principles, software development and testing

Amazon-Fire TV Stick

- Developed prototype features for Amazon-Fire TV Stick to integrate marketing notifications using Amazon's internal library and to integrate IMDB ratings with Amazon Prime videos using Java and XML

OPEN SOURCE CONTRIBUTIONS

***Google Summer of Code Student Developer*, CERN, Switzerland (Remote Project)** **Apr 2018 - Aug 2018**

- Learnt Git, CUDA, OO design skills and the mathematics behind deep learning optimization algorithms

ROOT-TMVA (Toolkit for Multivariate Data Analysis)

Provided support for advanced deep learning optimizers in the open sourced ROOT-TMVA, a data analysis software framework by CERN

- Implemented deep learning optimization algorithms (SGD, RMSProp, Adam, Adagrad etc.) by exploiting the parallel programming capabilities using C++ and low level libraries (Blas and CuBlas in CPU & GPU architecture); my code has been successfully integrated in the new production release of ROOT version 6.16

RESEARCH EXPERIENCE

Power Graph for Citation Network **Jul 2018 - till date**

Developed a new data structure by modifying power graph to represent relationships between author and co-author in a citation network dataset

- Deduced algorithms to perform queries like finding the bonding value between authors (in order to find the type of citation between papers) and a similarity index between research papers
- Working on reducing time and memory complexity of the implemented algorithms

COURSE PROJECTS

Customized Adversarial Image Generator **Aug 2018 - Oct 2018**

Developed an efficient method for generating adversarial images for MNIST dataset

- Implemented a variation of Fast Gradient Sign Method (FGSM) algorithm to perturb the input image to misclassify it to the target class; produced perturbed images indistinguishable to human eye

Credit Card Fraud Detection **Feb 2018 - Mar 2018**

Developed an ML model using multivariate Gaussian distribution to detect fraudulent credit card transactions

- Trained the model using standard credit card dataset available on Kaggle; achieved accuracy of 95% on new test data

Online Assessment System **Aug 2017 - Oct 2017**

Created a web application using Flask and Bootstrap framework for college students to attend online assessments

- Developed a user friendly UI to enable faculty to create online tests for students; automatically scored objectives and descriptive answers by matching key answers given by faculty

Alpha Math Tools **Sep 2015 - Nov 2015**

Developed an android application using Java and XML to solve basic mathematical problems

- Incorporated options to calculate interest for automobile/home loans and solve linear/quadratic equations for students; available on Play Store with 4.9 rating and 100+ downloads

INDEPENDENT PROJECTS

DocDroid Application for Medical Emergency **Dec 2017 - Jan 2018**

Developed an android application using Java and XML to facilitate people during medical emergencies

- Built server side using Flask framework; enabled automatic booking of ambulance & allocation of nearest hospital with adequate facility to patients with a single tap
- Sent notification to patient's emergency contacts to live track the ambulance

RESEARCH PAPERS PENDING PUBLICATION

- Mahalakshmi G.S*, Makesh Narsimhan Sreedhar*, **Ravi Kiran Selvam***, Sendhilkumar S: Exploiting Bi-LSTMs for Named Entity Recognition in Indian Culinary Science; In proceedings of the 4th international conference on Next Generation Computing Technologies, NGCT 2018; In Communications in Computer and Information Science Series of Springer Journal. (accepted and presented on Nov 2018)

CERTIFICATIONS

- Data Science at Scale Specialization (series of 4 courses) by UofWashington, Coursera, (ongoing)
- Deep Learning Specialization (series of 5 courses) by Deeplearning.ai, Coursera, Mar 2018
- Machine Learning by Stanford University, Coursera, Dec 2017
- Codechef Certified Data Structures and Algorithms Program (CCDSAP) - Advanced Level, CodeChef, Nov 2017

TECHNICAL SKILLS

Operating Systems: Linux, Windows
Languages: C, C++, Java, Python
ML Frameworks: Tensorflow, Keras, scikit-learn
Database and Client/Server Technologies: MySQL, MongoDB, Bootstrap, JavaScript, Flask
Software Tools: Android Studio, Git, Anaconda

AWARDS

- Ranked 35th among 250 teams (Amritapuri Regionals) and 30th among 120 teams (Chennai Regionals) across India in ACM International Collegiate Programming Contest, Dec 2017
- Won 25 coding competitions in 12 inter-college tech fests (by securing 1st among ~400 participants), Oct 2016 **-** till date

EXTRA-CURRICULAR ACTIVITIES

- **Founder, CEG Codechef Campus Chapter** - Delivered lectures on competitive programming to many college students and trained them to participate in the ACM-ICPC, Sep 2018 - till date
- **Problem Setter, Abacus'17 & Abacus'18**, departmental inter-collegiate national-level technical symposium- Organized 5 intercollegiate onsite & online programming contests (HackerRank, CodeChef), Anna University, Mar 2017 & Mar 2018
- **Volunteer, CEG Linux Users group (CEGLUG)** - Delivered lectures on open source tools to many college students to create awareness about the same, Sep 2017 - till date
- **Authored 2 blogs** for beginners on Algorithms and Data Structures with ~10,000 page views, (Link1, Link 2), Mar 2016 - till date

LANGUAGES: English, Tamil (Read/Write/Speak)