Dhanunjaya Varma Devalraju

CONTACT
INFORMATION

School of Computing and Electrical Engineering
Indian Institute of Technology Mandi

Voice: (91) 9740047965
E-mail: varma.devalraju@gmail.com
WWW: https://dhanunjaya.github.io
Github: https://github.com/dhanunjaya-varma

EDUCATION

Indian Institute of Technology Mandi, Mandi, India   2019 - present

M.S. Student, Computer Science Department   GPA: 9.27/10.0
Advisor: Padmanabhan Rajan
Coursework: Pattern Recognition, Deep Learning, Applied Mathematical Programming,
Optimization Techniques, Probability & Statistics

Jawaharlal Nehru Technological University Anantapur, Anantapur, India   2009 - 2013

B.Tech. (Hons.). with Distinction in Computer Science & Engineering   78.38%
Coursework: Mathematics Foundation for Computer Science, Data Structures using C,
Advanced Data Structures, Design & Analysis of Algorithms, Operating Systems, DBMS,
Object Oriented Programming, Software Engineering, Theory of Computation, Compiler Design,
Computer Organization, Computer Networks, Operation Research, Artificial Intelligence

FELLOWSHIPS,
HONORS AND
AWARDS

Half-Time Research Assistantship (HTRA) funded by MHRD, 2019, 2020
Awarded O Grade (About top 1% of class) in Pattern Recognition course
All India Rank of 2288 (About top 2% National wide) in GATE CS, 2017
ACE (Accenture Celebrates Excellence) award, 2014, 2016 and 2018
Accenture H&PS - Zenith Award in Young Champion Category, 2017
Winner, School Math Quiz, 2004-05

RESEARCH
EXPERIENCE

Indian Institute of Technology Mandi, Mandi, India   **Feb, 2019 - present**
Graduate Research Assistant, with Padmanabhan Rajan
Includes current M.S. research, assisting project engineers in Sonar and Bird research projects.

Soundscape Classification using Foreground and Background
Master's Thesis + Continuing Research, IIT Mandi

- Our work is on analysing and classifying acoustic scene by utilising the foreground and the background information.
- We proposed to apply the framework of Robust PCA to decompose audio corpus into the background corpus and the foreground corpus. Later, Nuisance basis is learned from these background and foreground basis and used subspace projection techniques to suppress a part of background and foreground. The nuisance removed data is used for classification. [Pub. EUSIPCO 2020]
- We also proposed a framework, which applies class-specific subspace projection by learning class-specific nuisance basis for both the background and the foreground. These class-specific projections are later combined using self-attention model to get a meta-embedding. This meta-embeddings are used for learning a classifier. [Pub. INTERSPEECH 2020]

Autism Classification using Deep Learning
Course Project: Deep Learning and Applications

- Trained 3D-autoencoder to extract spatial features for each 3D slice in 4D input ABIDE-1 (rs-fMRI) data, to keep temporal information intact.
- Trained LSTM for classification on the spatial features extracted from the autoencoder to get a classification accuracy of 63 %.

INDUSTRY EXPERIENCE	**Accenture**, Bangalore, Karnataka, India

Application Development Senior Analyst   **Dec 2017 - Feb 2019**
    Supervisor: Sateesh Guturu

Worked for large US Healthcare client as Siebel CRM Technical Architect. Where, my responsibilities include:
- Migration of existing Siebel Enterprise from windows 2008 to windows 2012, which includes installing and configuring Siebel cluster environments and migration of custom components.
- Upgrading Siebel CRM Enterprise application from IP14 to IP16 and exploring new features introduced in IP16 to check the feasibility of incorporate them in the client business.

Software Engineering Analyst/Application Development Analyst   **May 2015 - Nov 2017**
    Supervisor: Sateesh Guturu

Worked for Dell India as Siebel CRM Technical Architect. I was part of Siebel Upgrade team and my responsibilities include:
- Upgrading Siebel CRM Enterprise application from IP13 to IP15, which includes both Development and Production style upgrade. SSL, LDAP, SSO Implementation in Siebel.
- Troubleshooting and providing solution to upgrade related issues. Debugging and fixing performance related issues and memory leaks introduced due to upgrade.

Software Engineering Associate   **Jan 2014 - Apr 2015**
    Supervisor: Shukla Roy

Joined Accenture as a fresher. My first assignment was to work for large Spain telecommunication operator as Siebel CRM Administrator cum Developer.My responsibilities in the project include:
- Configuring enterprise environments, which includes servers and components configuration and parameter tuning for better performance. Integration of Siebel with external systems.

PUBLICATIONS
- Attention-Driven Projections for Soundscape Classification
  Dhanunjaya Varma Devalraju, H. Muralikrishna, Padmanabhan Rajan and Dileep A.D
  INTERSPEECH 2020: 1206-1210.

- Learning to Separate: Soundscape Classification using Foreground and Background
  Dhanunjaya Varma Devalraju, Padmanabhan Rajan and Dileep A.D
  EUSIPCO 2020: 21-25.

- End2end CNN-Based Low-Complexity Acoustic Scene Classification
  Arshdeep Singh, **Dhanunjaya Varma Devalraju** and Padmanabhan Rajan
  DCASE 2020 Challenge Technical Report

TEACHING ASSISTANTSHIPS

IC272: Data Science III, Indian Institute of Technology Mandi   Aug-Dec 2020
Assisting with course planning and development, Assisting with preparing and evaluating Assignments and Quizzes.
- Instructor: Professor Dileep Aroor Dinesh

IC201P: Design Practicum, Indian Institute of Technology Mandi   Feb-June 2020
Assisting with course planning and development, Assisting with preparing and evaluating Assignments. Holding a weekly discussion section with assigned students group, mentoring and providing logistics required for course project.
- Instructor: Professor Subhamoy Sen

CS308: Large Applications Practicum, Indian Institute of Technology Mandi   Aug-Dec 2019
Assisting with course planning and development, Assisting with preparing and evaluating Assignments and Quizzes. Assisting and Clarifying student doubts in lab session. Mentoring and assessing students course project teams.
- Instructors: Professor Padmanabhan Rajan, Professor B.D. Chaudhary

CS307: System Practicum, Indian Institute of Technology Mandi   Feb-June 2019
Arranging course logistics, Assisting with course planning and development, Assisting with preparing and evaluating Assignments and Quizzes. Clarifying student doubts in lab session.
- Instructors: Professor Aditya Nigam, Professor Timothy A Gonsalves

PROFESSIONAL
SERVICE

Workshop Organization:
- Winter School on Speech and Audio Processing (WiSSAP-2020): Machine Listening at Indian Institute of Technology Mandi, India, January 8-10, 2020.

COMPUTER SKILLS
- Languages: Python, C, C++, Core Java, some use of Unix shell scripts.
- Libraries: sklearn, numpy, matplotlib, keras, tensorflow, pytorch, seaborn, pandas.
- Applications: GIT, SVN, Docker/Singularity, LaTeX.
- Operating Systems: CentOS, Ubuntu, RHEL, AIX, Windows Server class.