Curriculum Vitae – Shivanand Venkanna Sheshappanavar

Personal Information

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Research Interests

3D Computer Vision, Point Cloud Analysis, Geometric Deep Learning, and Machine Learning.

Education

Doctor of Philosophy in Computer and Information Science. **Spring 2023 (expected)**
University of Delaware (UD), Newark, Delaware, USA.

Master of Science in Computer Science. **May 2018**
Syracuse University (SU), Syracuse, New York, USA.

Master of Technology in Computer Science and Engineering. **August 2012**
R.V. College of Engineering (RVCE), Bengaluru, India.

Bachelor of Engineering in Computer Science and Engineering. **June 2009**
M.S.Ramaiah Institute of Technology (MSRIT), Bengaluru, India.

Work in Progress

Sheshappanavar, Shivanand Venkanna, Vinit Veerendraveer Singh, Yufan Wang, and Chandra Kambhamettu. "3DGrocery100 : A large benchmark 3D dataset on grocery" (towards a journal submission) expected mid-2023

Sheshappanavar, Shivanand Venkanna, and Chandra Kambhamettu. Revisiting Human Activity Recognition in Point Cloud Sequences (towards a conference submission) expected early-2023

Accepted Publications

Sheshappanavar, Shivanand Venkanna, and Chandra Kambhamettu. "SimpleView++ : Neighborhood Views for Point Cloud Classification" 2022 IEEE 5th International Conference on Multimedia Information Processing and Retrieval (MIPR). IEEE, 2022. (Acceptance rate **20**%), , .

Sheshappanavar, Shivanand Venkanna, Vinit Veerendraveer Singh, and Chandra Kambhamettu. "PatchAugment : Local Neighborhood Augmentation in Point Cloud Classification." Proceedings of the IEEE/CVF International Conference on Computer Vision Workshops. 2021. (Acceptance rate **30-40**%), , .

Sheshappanavar, Shivanand Venkanna, and Chandra Kambhamettu. "Dynamic local geometry capture in 3d point cloud classification." 2021 IEEE 4th International Conference on Multimedia Information Processing and Retrieval (MIPR). IEEE, 2021. (Acceptance rate **20**%), , .

Singh, Vinit Veerendraveer, **Shivanand Venkanna Sheshappanavar**, and Chandra Kambhamettu. "MeshNet++ : A Network with a Face." Proceedings of the 29th ACM International Conference on Multimedia. 2021. (Acceptance rate **9**% Oral), , .

Singh, Vinit Veerendraveer, **Shivanand Venkanna Sheshappanavar**, and Chandra Kambhamettu. "Mesh Classification with Dilated Mesh Convolutions." 2021 IEEE International Conference on Image Processing (ICIP). IEEE, 2021. (Acceptance rate 46%), , .

Sheshappanavar, Shivanand Venkanna, and Chandra Kambhamettu. "A novel local geometry capture in PointNet++ for 3D classification." Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops. 2020. (Acceptance rate **30-40**%),, .

Sheshappanavar, Shivanand Venkanna, and Mohan Chilukuri. "LSTM based Soil Moisture Prediction", Proceedings of the North Eastern Regional Conference on Complex Systems (NERCCS) - 2018, , .

Manish Verma, **Shivanand Venkanna Sheshappanavar**. 'HoS : A metric driven approach to measure Quality/Health of Silicon", 2nd Runner up, iTech Days 2012, Infineon Technologies India Pvt Ltd, Bengaluru. (Acceptance rate **29**%, **Awarded third prize**).

Conference Reviewer

IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2022,
European Conference on Computer Vision (ECCV) 2022,
IEEE International Conference on Pattern Recognition (ICPR) 2022.

As a Student Reviewer (on behalf of my Advisor) :
IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) - 2021, 2020, 2019.
IEEE International Conference on Automatic Face & Gesture Recognition (FG) - 2021, 2019.
ACM International Conference on Multimedia (ACM MMM) - 2021, 2020.
European Conference on Computer Vision (ECCV) 2020

Journal Reviewer

IEEE Robotic Automation Letters 2022.

Teaching Experience

CISC 210 Introduction to Systems Programming Summer 2020
Class strength : 43, Class duration : 10 weeks, Course Evaluation **4.2/5.0**.
Composed a 300+ questions repository for online quizzes.

Teaching Assistant

CISC 220 Data Structures Fall 2021
- Proctoring, three weekly lab sessions, grading, weekly office hours.
CISC 210 Introduction to Systems Programming (Spring'19, Fall'19, Spring'20, Fall'20, Spring'21, Fall'22).
- Lead TA ; coordinating and delegating work to 4 graduate TAs and ten undergrads TAs
- proctoring, grading, handling weekly lab sessions, weekly office hours.
CISC 101 Principles of Computing (Winter'21)
- Office hours, Grading, Lab sessions supervision.
CISC 361 Computer Architecture (Fall'18).
- Proctoring, grading, weekly office hours, taught two lectures.
CIS 700 Machine Learning Methods in Security (Spring'17)
- Assignments grading.

Research Assistant

Research Assistantship, University of Delaware. Summer (2019, 2021 & 2022)
Video/Image Modeling and Synthesis (VIMS) Lab. Dept. of Computer and Information Sciences.

Graduate Research Assistantship, Syracuse University. August 2016 - May 2018
Research Assistantship, Dept of EECS, Syracuse University, Syracuse, NY, USA.

Professional Experience

IT Consultant - Oracle India Private Limited, Bengaluru. October 2012 - June 2016
- Implemented Oracle Fusion, EBS R12 Applications and worked dedicatedly at client location (Alcoa, Pittsburgh, PA, May-Oct 2014) during the testing of product (pre, during, post go-live).
- Key contributor to formulate the process of knowledge transition for ITG tool at Alcoa inc.
- Worked closely and developed Strong working relationships with Oracle's key accounts such as Alcoa Inc., British Telecom., Red Robin Restaurants, First America, Blackrock, Financial Corp., Church Pension and Land O Lakes.
- Automation, Patching, Backups, Bounces, Deployments, BI Reporting, Migrations, Cloning, Upgrade, Data fixes, Data Masking, Periodic Prod password change and auditing.
- Trainings : UNIX Fundamentals, SQL/PLSQL, Oracle Database 11g Admin Workshop I and II.

Intern - Infineon Technologies Private Ltd, Bengaluru. July 2011 - May 2012
Built a metric-based Post-Silicon Validation tracking system (coverage information).
Developed Automation scripts across teams and resolved issues for a specific tool.

Skills

Key Concepts : Linear Algerba, Optimizations, Object Oriented Programming, Multithreading
Programming Languages : Python, C, C++, CUDA
Deep Learning Frameworks : PyTorch, PyTorch3D, TensorFlow, Keras, Scikit-learn, Numpy
Computer Vision Libraries : OpenCV, MATLAB
Database and Cloud Technologies : Oracle, MySQL, SQL, AWS(Ubuntu)
Tools : Visual Studio, RStudio, MATLAB, PyCharm, XCode, Git, LaTeX

Awards

Best Teaching Assistant Award (2020-2021), Dept. of CIS, University of Delaware.
Third Prize - iTech Days, Infineon India Private Limited, Bengaluru. May 2012

Relevant Background Coursework

CISC 642 Computer Graphics (Spring'21), CISC 889 Neural Networks & Deep Learning(Spring'20)
CISC 849 Robot Vision & Learning(Fall'19), ELEG 667 Convex Optimization(Fall'19)
MATH 637 Math Techniques for DS(Spring'19), CISC 640 Intro to Computer Vision(Fall'18)
CIS 700 Advances in Deep Learning(Spring'18), CIS 731 Artificial Neural Networks(Fall'17)
CIS 700 ML Methods in Security(Spring'17), CIS 700 Structure of Complex Networks(Spring'17)
Coursera Deep Learning Specialization by Andrew Ng : 3 courses from the specialization

Other Services

SIGVIS/GRAPHICS - Spring 2019, Fall 2019, Spring 2020, Fall 2020, and Spring 2021.
- Co-ordinated and managed the schedule for the weekly Special Interest Group (SIG) colloquium on Computer Vision and Graphics in the Dept. of CIS, University of Delaware.

Group creator and admin to Facebook Group PhDinUS - over 28k members
- guiding PhD aspirants around the world (evaluating profiles, faculty/university matching).
- assisting newly joined Assistant Professors to recruit PhD students.

Talks or Presentations

MIPR Conference 2022 - SimpleView++ :Neighborhood Views for Point Cloud Classification (8/4/22)
PhD Proposal Defense - Learning from Neighborhoods for 3D Point Cloud Classification (2/11/22)
ICCV Workshop 2021 - Deep Learning for Geometric Computing - on PatchAugment (10/16/21)
MIPR Conference 2021 - on Dynamic local geometry capture in 3D point cloud classification (9/9/21)
SIGVIS/GRAPHICS Fall 2021 - Two talks - on P4Transformer (10/13/21) and PSTNet (10/20/21)
Deep Robust & Explainable AI Lab Reading Group - on P4Transformer (11/10/21)
CVPR Workshop 2020 - Deep Learning for Geometric Computing - on Ellipsoid Querying (6/13/20)
SIGVIS/GRAPHICS Spring 2020 - on Relation-Shape CNN (4/6/20)
PhD Research Prelim Presentation - Ellipsoid Querying (5/17/20)
SIGVIS/GRAPHICS Fall 2020 - Convolution in the cloud (10/21/20)
SIGVIS/GRAPHICS Fall 2018 - Two talks - on PointNet (10/31/18) and PointNet++ (11/14/18)

References

Dr. Chandra Kambhamettu (Advisor - chandrak@udel.edu),
Dr. Andrew Roosen (roosen@udel.edu),
Dr. Sunita Chandrashekaran (schandra@udel.edu).