Vamsikrishna Gopikrishna

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Work Experience

Senior Lecturer (*September 2017 –*)
University of Texas at Arlington, Arlington TX

- Instructor for **Discrete Structures; Artificial Intelligence, Data Analysis & Modeling Techniques** for Undergraduate and Graduate Students

Adjunct Professor (*January 2017 – May 2017*)
University of Texas at Arlington, Arlington TX

- Instructor for **Artificial Intelligence** for senior year Undergraduate and Graduate Students.

Instructor (*August 2015 – December 2015, August 2012 – December 2012, June 2011, June 2010*)
University of Texas at Arlington, Arlington TX

- Instructor for **Artificial Intelligence** for senior year Undergraduate and Graduate Students.
- As part of Transitions Summer Bridge Program (http://www.uta.edu/transitions/) taught **STEMS Introduction to Engineering** to High School students
- As part of Upward Bound Math & Science Center (http://www.uta.edu/ubmathsci/) taught **Precalculus & Engineering Research,** for High School students.

Teaching Assistant (*February 2010 – May 2016*)
University of Texas at Arlington, Arlington TX

- Teaching assistant for **Autonomous Robots**; **Artificial Intelligence**; **Computer Graphics**; **Reinforcement Learning; Reasoning with Uncertainty for Data Interpretation, Modeling, and Decision Making**; **Discrete Structures**; **Software Project Management; Software Evolution and Reengineering; Unmanned Vehicle Systems**
- Tutor at a Help desk that helped students of **Introduction to Computers & Programming** and **Introductory Programming for Engineers & Scientists** with their assignments.

Education

Doctor of Philosophy, Computer Science (*August 2016*)
University of Texas at Arlington, Arlington, TX

Major: Artificial Intelligence (Computer Vision, Neural Networks, Pattern Recognition and Machine Learning), GPA: **3.5**
Course work: Machine Learning; Neural Networks; Software Engineering Management & Quality Assurance; Computer Architecture; Computer Vision in Robotics; Computer Vision; Computer Graphics; Data Modeling and Analysis; Multi-agent Systems.
Dissertation: *Building 3D Shape primitive based object models from range images*. Mentored by Dr. Manfred Huber. Implemented methods proposed in MatLab.

Master of Science, Computer Engineering (*December 2008*)
University of Texas at Arlington, Arlington, TX

Major: Artificial Intelligence, GPA: **3.4**
Course work: Artificial Intelligence; Robotics; Reasoning with Uncertainty for Data Interpretation, Modeling, and Decision-Making; Databases; Analysis of Algorithms; Networks; Operating Systems.
Thesis: *Temporal Potential Function approach for Path planning in Dynamic Environments*. Mentored by Dr. Manfred Huber. Implemented the method proposed in thesis using MatLab.

Bachelor of Engineering, Computer Science & Engineering (*June 2006*)
Sri Venkateshwara College of Engineering, Anna University, Chennai, India
Graduated First Class
Final year project: *Automation of Identification of Protein-Coding region in Human DNA* in Java.

Research

- **Inverse Reinforcement Learning for Decentralized Non-Cooperative Multiagent Systems** – Tummalapalli Sudhamsh Reddy, Vamsikrishna Gopikrishna, Gergely Zaruba, Manfred Huber. IEEE International Conference on Systems, Man and Cybernetics (SMC), Seoul, Korea, October 2012.
- **A Temporal Potential Function Approach for Path Planning in Dynamic Environments** – Vamsikrishna Gopikrishna, Manfred Huber. IEEE International Conference on Systems, Man, and Cybernetics (SMC), San Antonio, Texas, October 2009.
- **TC-ID3: A TESTCODE based ID3 Classifier for Protein Coding Region Identification** – International Conference on Computational Intelligence for Modeling, Control and Automation (CIMCA), Sydney, Australia, November 2006.

Projects

- Developed a Neural Network based 3D Object model builder in MatLab. *Additional experiments in progress for potential paper*. (2016)
- Developed a Neural Network and Function Minimization based 3D Feature learner in MatLab. *Additional experiments in progress for potential paper*. (2015)
- Developed a Neural Network based face and expression classifier in MatLab (2012)
- Implemented an Inverse Reinforcement Learning system for Multi agent systems in MatLab using its optimization Toolbox. (2012)
- Developed a simple text based Android Game. (2011)
- Developed a Robot path planning simulator in MatLab (2009)
- Conducted research on A* Algorithm under the guidance of Dr. Deepak Khemani of Indian Institute of Technology, Chennai. Implemented the algorithm using LISP (2006)
- Developed a text based DNA protein coding region identifier in Java (2006)
- Developed a Banking - Customer Care System for Microsoft Student Project Program using Microsoft .NET Technologies (ASP .NET & C# .NET) (2005)
- Developed a LAN chat system for use in office environment using Socket Programming in Visual C++ for Pentasoft Technologies, Chennai during In-Plant Training. (2004)

Skills/Abilities

Areas of Interest

Pattern Recognition, Machine Learning, Neural Networks, Cognitive Vision, Artificial Intelligence, Perceptive Learning, Robotics, Data Mining.

Software Skills

- MatLab (Neural Networks, Function optimization, Image Processing), Simulink, Python, R, Java, C, Visual Basic .NET, ASP .NET, LISP, mySQL, Panda3D, OpenGL.

Organizations

- ACM; IEEE; AAAI (UTA); Association of Computer Engineers (India).