

# Venkata Sukumar Gurugubelli

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## EDUCATION

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- **May 2022** | Ph.D. in Computer Science and Information systems, University of Massachusetts Dartmouth, MA, USA
- **January 2019** | Master's in Computer and Information Science, University of Massachusetts Dartmouth, MA, USA
- **May 2013** | B.Tech. in Information Technology, TKR College of Engineering and Technology, Hyderabad, India

## PROFESSIONAL SKILLS

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- **Programming:** R, SAS, MATLAB, Python, LaTeX, JavaScript, XML, SQL, HTML, Shell
- **Programming libraries:** PyTorch, Tensorflow, NumPy, d3, dplyr
- **Applications:** R studio, Jupyter Notebook, SAS Enterprise edition, Various MATLAB toolboxes, IBM SPSS, Microsoft office suite
- **Data Science:** Machine Learning, Artificial Intelligence, Feature Engineering, Forecasting, Cloud Computing
- **Platforms:** Windows, Mac OS, Ubuntu, Linux

## RESEARCH EXPERIENCE

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(4 Years, 3 Months) **January 2018 – Current** | University of Massachusetts Dartmouth, Dartmouth, MA, USA

### Doctoral Researcher

- Designed and developed deep learning models for outcome prediction in large multi-dimensional longitudinal dietary and data using PyTorch, Tensorflow, Jupiter Notebook.
- Preprocessed big data and performed statistical analysis using dplyr, ggplot2 in R, SAS, SPSS, Python, and shell programming.
- Utilized tools such as Tableau, D3 as needed for presenting data insights and visualizations.
- Led multiple research projects as a senior research assistant and guided the junior research members in ways of research methodologies.
- Worked with researchers from 4 local and two national study centers to reach collaboration goals in timely fashion.
- Peer-reviewed articles for smart health, international conference on computing, networking and communications Journals.
- Presented research work at multiple conferences and workshops to represent university and department.
- Reviewed applicants and conducted interviews for recruitment of students for lab under specified criteria.

(3 Months) **June - Sept 2017** | University of Massachusetts Medical School, Worcester, MA, USA

### Research Assistant

- Collaborated with 3 computational scientists to design, develop, test, and validate enhanced Fuzzy clustering (eFCM) algorithm using real longitudinal data.
- Published paper and presented at international level conference in collaboration with two colleagues.

## PROFESSIONAL EXPERIENCE

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(2 Years, 2 Months) **May 2013 - June 2015** | Contenterra Software Pvt. Ltd., Hyderabad, Telangana, India

### User Experience Researcher

- Promoted as User Experience Designer to focus on fine-tuning the interfaces by reiterating over interactions across the application where necessary, analyzing user feedback, and conducting quantitative analytics using python and the data obtained from user surveys.
- Improved customer experience by providing additional means to contact developers by collecting metadata of the application's page from where the user is reporting the bug. The impact was the reduction in time for a bug report to reach the developers of features on a page.
- Co-ordinated with a team of 4 developers and 3 testers, and with manager and principle of the company, when taking decisions and implementing suggested improvements to user interfaces.

**ENTREPRENEURIAL EXPERIENCE**

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(2 Years, 1 Month) **June 2013- June 2015** | **Instanton Tech Solutions**, Web & graphic design company**Co-Founder**

- Conducted Market research and lead identification.
- Managed the day-to-day operations of the business.
- Conducted hiring, firing, and payroll.
- Enforced scrum software methodology for web development and quality assurance
- Supervised and assisted the team in Web, Graphic, UI & UX design.
- Used Adobe Photoshop, Illustrator, Dreamweaver for design and quality control to provide the clients with best customer satisfaction.
- Provided Design and Web development services for more than 30 clients with ~90% satisfaction.
- Developed customer satisfaction survey to collect feedback from clients regarding their experience.

**TEACHING EXPERIENCE**

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(1 Year, 4 months) **Sep 2017 - Dec 2018** | University of Massachusetts Dartmouth, Dartmouth, MA, USA**Teaching Assistant**

- Course Titles: Computer Graphics, Machine Learning
- (N=50, mix of Undergraduate, graduate, and doctoral students)
- Taught in class on multiple occasions as a teaching assistant.
- Assisted professor in course design and conducting class activities.
- Prepared teaching materials for computer graphics using codepen.io
- Conducted office hours to help clarify students' questions and provide beyond the course experience
- Graded tests, assignments, and group projects

**PUBLICATIONS**

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- **Gurugubelli, V. S.**, Hua Fang, and Honggang Wang, "Regularizing neuro-fuzzy model (mGNNF) for outcome prediction in longitudinal data", in progress
  - **Gurugubelli, V. S.**, Fang, H., Shikany, J. M., Balkus, S. V., Rumbut, J., Ngo, H., . . . Steffen, L. M. (2022). A review of harmonization methods for studying dietary patterns. Smart Health, 23. doi:10.1016/j.smhl.2021.100263
  - **Gurugubelli, V. S.**, Validation of Neuro-Fuzzy Based Classifiers for Outcome from Longitudinal RCT, JSM 2020
  - **Gurugubelli, V. S.**, Hua Fang, and Honggang Wang, "Neuro-Fuzzy classifier for longitudinal behavioral intervention data" ,2019 International Conference on Computing, Networking and Communications (ICNC), pp. 385 - 389.
  - **Gurugubelli, V. S.**, Zhouzhou Li, Honggang Wang, and Hua Fang, "A Computational Efficient Fuzzy Clustering Algorithm for Big Incomplete Longitudinal Trial Data" ,2018 IEEE/ACM International Conference on Connected Health: Applications, Systems and Engineering Technologies (CHASE), pp. 25 - 26.
  - **Gurugubelli, V. S.**, Zhouzhou Li, Honggang Wang, and Hua Fang, "eFCM: An Enhanced Fuzzy C-Means Algorithm for Longitudinal Intervention Data" ,2018 International Conference on Computing, Networking and Communications (ICNC), pp. 912 - 916.

**HONORS AND AWARDS**

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- **April 2018** | CIS Graduate Research Award
  - **2018-2022** | Research Assistantship, Stipend, and full tuition support for all semesters of PhD program
  - **December 2011** | EC-Council Roll of Honor

**PROFESSIONAL SERVICE**

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**Symposiums Volunteered**

- Infocom Conferences, 2021
- IEEE Healthcom, 2021
- ICNC 2018, International Conference on Computing, Networking and Communications
- ICNC 2019, International Conference on Computing, Networking and Communications

**Peer-Reviewed Articles for:**

- Smart Health
- International Conference on Computing, Networking and Communications

**PRESENTATIONS AND INVITED LECTURES**

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- **September 2018** | Three-minute thesis, University of Massachusetts- Dartmouth, MA
- **June 2011** | Linux Networking bootcamp, Chaitanya Bharathi Institute of Technology, Hyderabad, India
- **Sept 2013** | Invited Lecture on Entrepreneurship, VNEVJ, Hyderabad, India

**PROFESSIONAL TRAINING**

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- **November 2021** | The Future of Patient-Centered Mobile Remote Patient Monitoring (mRPM)
- **November 2021** | Swarm AI For Decentralized Clinical Research and Precision Medicine
- **January 2019** | Responsible Conduct of Research for Engineers, CITI Program
- **January 2019** | Conflicts of Interest, CITI Program
- **January 2019** | Human Research – Data or Specimens Only Research, CITI Program
- **August 2012** | Certified Information Security Consultant, Institute of Information Security
- **Nov 2011** | CEH V7 Certification, EC-Council

**PROFESSIONAL AFFILIATIONS**

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- **2019- present** | IEEE Young Professionals
- **2019- present** | American Statistical Association Student member
- **2009-2013** | Microsoft Developer Group Hyderabad, India
- **2011-2012** | Member of Null-Con security professionals' network, Hyderabad, India

**COMMUNITY SERVICE**

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- **2020-2022** | Indian Student Association, President, University of Massachusetts Dartmouth
- **2011** | Swecha Event Organizer, Hyderabad, India

**HOBBIES**

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- Piano: Novice player, composer - 50 hours of practice
- Photography
- Graphic, Web Design
- Blogging
- Competitive First-person shooting player