MANIAMMA JISHA

### Indian, Female

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**Education**

* Kyushu Institute of Technology,

**Ph.D.** (Artificial Intelligence), Japan Oct. 2016-March 2020

* S.R.M University,

**M.TECH** (Robotics), India, Oct. 2012- June 2014 Graduated with C.G.P.A 8.336

* Narayana Guru College of Engineering

**BE (**Electronics & Communication Engineering), India July 2008- Aug. 2012 Graduated with 83%

* ABK-AOTS Dosokai, India June 2014- Jan. 2015 Japanese Language Conversation
* **Certification course**
  + e-Learning Course on **Research Ethics**

### Japan Society for the Promotion of Science (JSPS) 25 May 2018

* + Diploma in Computer Application (**DCA**) Dec 2007-June 2008
* Kyushu Institute of Technology,

**Study Abroad** Oct. 2013- March 2014

### Key Courses- Advanced Vehicle Control, Advanced Space Dynamics, Space System Engineering

**Internship**

* **National Institute of Informatics** (NII), Tokyo, Japan Oct. 2017-Nov. 2017 Study on Continuous SPARQL (C-SPARQL) Protocol and RDF Query Language for Stream data

# Scholarships

## **T.Banaji Indian Students Scholarship** 2019

### [Among 3 Indian students across all Japanese Universities to be selected for the scholarship]

* **Kanazawa Memorial Scholarship** 2017-2019

## **Japan Student Services Organization (JASSO) Scholarship** 2016-2017

* **Special scholarship from NGCE Chairman** during BE 2008-2012
* **ISWC (2018) Travel award**, The Semantic Web Science Association (SWSA) and the U.S. National Science Foundation (NSF)

# Work Experience

* **Juntos, Japan: [Japanese Highly Skilled Professional Visa (till 08-03-2026)]**

Position -**Software Engineer** Dec. 2020

### Planning and Developing Multiuser-Desktop softwares for project management in companies (to visualize the progress of projects and to check the priority of each projects and plan the projects with human resources and days for each task in a given project).

### Successfully deployed a Desktop software for Project status analysis using Java and PostgressSQL database.

### Working as a Full-Stack Engineer to develop Multiple project.

### **Grian Technologies Pvt. Limited** (GrianTek), India

Position -**Research Assistant** Feb. 2016 – July 2016

### Excellent leadership skills were demonstrated in developing and managing multiple research protocols.

* Excellent teamwork and collaboration skills in solving problems related to the research project.
* Carried out research in the field of Wireless sensor networks (WSN), Vehicular Adhoc Networks (VANET), Mobile AdHoc network (MANET), intelligent MIMO network, Cognitive Radio Networks (CR), Genetic Algorithm (GA), Fuzzy optimization and decision making, Particle Swarm Optimization (PSO), Bacterial Foraging Optimization (BFO), with multiple malicious attackers in any considered network.
* Successfully developed energy efficient, longer span mobile networks with more reliability and accuracy compared to the conventional networking technologies employed in day to day life.
* Prepared research manuscripts and research presentations.
* Provided computational research support and performed studies as related to the research project requested by the clients.
* Modified, tested, verified and analyzed research data.
* High-level strategic planner for tabulation and recording of results of experiments.
* Developed and maintained research articles.
* Interacted well with research clients and gave them multiple technical demonstrations.
* **Wagatsuma Laboratory**, Kyushu Institute of Technology

Position -**Research Assistant** Oct. 2016~March 2020

# Projects

* **Autonomous car project [NEDO]** Oct. 2016- Current
* **Agricultural robot project [NEDO]** June 2018- Current

## **Localization of suborbital vehicle using On-board map and camera image**, Japan

### [Mars exploration project] Oct. 2013- March 2014

* **Robotic arm for internal use in hazardous environment** July 2011- June 2012

# Computer Skills

### **Specialties:** Semantic Web, Natural Language Processing, Information Integration, Image Processing, GUI development, Adhoc Networks (MANET, WSN)

* **Languages:** Java, C, C++, MATLAB, Open CV, SPARQL, Python, SQL
* **DataBase:** SQLite, Postures
* **Modeling Software:** JavaFX, Protégé (Ontology), Eclipse IDE, Solid works, NS2
* **Front hand:** MS Office
* **Web Technology:** HTML5, CSS, Resource Description Framework (RDF) (SWRL, SPARQL)

# Language Skills

**Native and Fluent:** English (TOEIC score - 900),

### Tamil, Malayalam, Hindi,

Japanese (JLPT-N5)

**Limited Proficiency:** Gujarati, Bengali, Punjabi, Telugu

# Practical Training

* In plant training at **All India Radio**, India

### In plant training at **BSNL** (Bharat Sanchar Nigam Limited), India

* In plant training at **KKNPP**, India

**Achievements**

* Actively participated in **J-Node Hackathon**, RIKEN BSI, Saitama

### Research member involved in Sakura Science Program: KYUTECH-IIT Kanpur research collaboration (JSPS).

* Presented in **NEDO next-generation AI workshop** in Makuhari 2017/10/5-6.
* President of KFSA (Kitakyushu Foreign students associations).

### Represented Kyushu Institute of Technology in International Student Association Networking event (Yokamon), as President, scheduled on the 17th of June.

* Successfully carried out a research presentation on “*An Introduction to Protégé*” for various industrial (at Wagatsuma Lab, KYUTECH) and academic researchers (at NII, Tokyo).
* Teaching Japanese students and parents (collaborated with GAKKEN Volunteer Association and local organization)
* School topper in 12th, in Mathematics, with 98%.
* Won School and district level volleyball competitions
* Won various prizes in School Level and national level games & art competitions.

**Extra-Curricular Activities**

* Performed Indian classical dance at various International events in Fukuoka (Namaste Fukuoka).
* Actively learning Japanese organized by Kitakyushu Foundation for the Advancement of Industry, Science and Technology (FAIS).
* Actively participated in the launch of Winged Reusable Sounding Rocket (KYUTECH, Tobata).
* Successfully attended in the classes conducted by the Executive Director of JAXA, Japan - Dr. Kuniaki Shiraki.
* Actively involved in conducting the (technical) event in the **ENTIRE 2K11**-National Level Technical Symposium.
* Participated in zonal round of **RoboTryst-2012** a national level robotics championship organized by

**Robosapiens** Technologies Pvt. Ltd.

### Participated in **ZESTA 2011** National Level Technical Symposium

**Publications/Conferences**

**[CONFERENCE]**

* + Hiroaki Wagatsuma, **Jisha Maniamma**, Ryutaro Ichise, Hakaru Tamukoh, Keiju Anada and Masahiko Watanabe (2018): Application-Independent Ontology Design Shared in Human-Assist Systems for Automated Driving, Agricultural Plant Automation and Nursing-Care Managements, Joint 10th International Conference on Soft Computing and Intelligent Systems and 19th International Symposium on Advanced Intelligent Systems in conjunction with Intelligent Systems Workshop 2018 (SCIS- ISIS2018), December 5-8, 2018, Toyama, Japan.
  + **Jisha Maniamma** and Hiroaki Wagatsuma (2018): How We Treat Logical Rules to Solve Puzzles: A Semantic Web Approach for Bongard Problems, 日本神経回路学会第28回全国大会（JNNS2018 Posters & Demos, The 28th Annual Conference of the Japanese Neural Network Society (*JNNS 2018*), October 24 - 27, 2018, Okinawa Institute of Science and Technology (OIST), Okinawa, Japan.
  + **Jisha Maniamma** and Hiroaki Wagatsuma (2018): A Semantic Web Technique as Logical Inference Puzzle-Solver for Bongard Problems, ISWC 2018 Posters & Demos, The 17th International Semantic Web Conference (*ISWC 2018*), October 8 - 12, 2018 Monterey, California, USA.
  + **Jisha Maniamma** and Hiroaki Wagatsuma (2018): Human Abduction for Solving Puzzles to Find Logically Explicable Rules to Discriminate Two Picture Groups Ostracized Each Other: An Ontology- based Model, FAIM Workshop On Architectures And Evaluation For Generality, Autonomy & Progress in AI, 27th International Joint Conference on Artificial Intelligence and the 23rd European Conference on Artificial Intelligence (*IJCAI-ECAI 2018*), July 15, 2018, Stockholm, Sweden.
  + **Maniamma, J.**, Wagatsuma, H. (2017): An Ontology-Based Knowledge Representation Towards Solving Bongard Problems, The 12th International Conference on Innovative Computing, Information and Control (*ICICIC 2017*), August 28–30, 2017, Kurume, Japan.
  + Muthusamy, A., Kaur, G., Gupta, R., Agarwal, V., Nakayama, S., Ichiki, M., **Maniamma, J.**M Bhattacharya, B., Wagatsuma, H. (2017): A Narrative Speech, Gaze and Gesturing Robot Accessing to Human Emotion and Memory Which is Investigated by Using a Simultaneous Recording of Electroencephalogram and Eye-Tracker System, The 12th International Conference on Innovative Computing, Information and Control (*ICICIC 2017*), August 28–30, 2017, Kurume, Japan.
  + **Maniamma, J.**, Hagio, M., Togo, M., Shimotake, A., Matsumoto, R., Ikeda, A., Wagatsuma, H. (2017): A High-Precision Skilled Movement Evaluation by using Curvature Analysis in the Simultaneous Recording of 3D Motion Capture System and Intracranial Video-EEG Monitoring and Stimulation, The 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (*EMBC 2017*), ID FrDT17-08.3, July 14, 2017, JEJU International Convention Centre, Jeju Island, Korea.
  + Wagatsuma, H., Togo, M., Ichiki, M., Hagio, M., Yoshida, H., **Maniamma, J.**, Asai, Y. (2017): odML- NIX Standardization Workflow for EEG and Motion recordings, Brainhack Global (2017) Japan, March 2 – 4, 2017, RIKEN BSI, Wako, Saitama, Japan.
  + WON Junghyun、**MANIAMMA Jisha**、WAGATSUMA Hiroaki (2017): An ADAS Framework for Automated Driving System by Using the Simulation of Urban Mobility (SUMO) Focusing on Reconciliations on Urban Complex Cross Roads, 日本神経回路学会全国大会講演論文集 (*JNNS 2017*), 27: 70‐71, Sep. 20, 2017.
  + **MANIAMMA Jisha** (Kyushu Inst. Technol.) 、 WAGATSUMA Hiroaki (Kyushu Inst. Technology (2017): Semantic-Web Based Representations to Solve Bongard Problems with a Logical Reasoning Architecture, 日本神経回路学会全国大会講演論文集(*JNNS 2017*),27：71‐72, Sep. 20, 2017.
  + FUKUSHIMA Katsumi (Kyushu Inst. Technol.) 、 WON Junghyun (Kyushu Inst. Technol.), **MANIAMMA Jisha** (Kyushu Inst. Technol.) 、 WAGATSUMA Hiroaki (Kyushu Inst. Technol.) (2017): An Efficacy of the Deep Learning System Applying for Discrimination of Target Sensor Data when the ADAS Millimeter-Wave Radar is Unstable in Pursuit of Pedestrians Along City Roads,日本神経回路学会全国大会講演論文集(*JNNS 2017*), 27: 86‐87, Sep. 20, 2017.
  + FUKUSHIMA KATSUMI (九州工大大学院生命体工学研究科)、WON Junghyun (九州工大大学院生命体工学研究科) 、 **MANIAMMA Jisha** ( 九州工大 大学院生命体工学研究科) WAGATSUMA Hiroaki (Kyushu Inst. Technol.) (2017): An Investigation of Requirements for the Pedestrian Detection in Radar-Based Sensing Systems, Material：ファジィシステムシンポジウム講演論文集(CD-ROM), 33: ROMBUNNO.FA2‐2, 2017.

**[PUBLICATIONS]**

* + **Jisha Maniamma** and Hiroaki Wagatsuma, An Semantic Web-based Representation of Human-logical Inference for Solving Bongard Problems, Journal of Universal Computer Science: Special Issue on “New Trends in Logic Reasoning Based Decision Making.”, 2019.
  + **Jisha Maniamma** and Hiroaki Wagatsuma, A Semantic Web Technique as Logical Inference Puzzle- Solver for Bongard Problems, Proceedings of the ISWC 2018 Posters & Demonstrations, Industry and Blue Sky Ideas Tracks co-located with 17th International Semantic Web Conference (ISWC 2018), Monterey, USA, October 8th to 12th, 2018.
  + **Jisha Maniamma** and Hiroaki Wagatsuma, An ontology-based knowledge representation towards solving Bongard problems, Article in ICIC Express Letters, An International Journal of Research and Surveys, 12(7): 681-688, July 2018.
  + Localization of Suborbital Vehicle Using On-Board Map and Camera Image, **Jisha Maniamma**, International Journal Of Innovative Research In Electrical, Electronics, Instrumentation, And Control Engineering, Vol. 4, Issue 5, May 2016.