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Dr. Gautam Ravindra Dange

Post-doc at **The University of Bremen, Germany**	[June 2020 – working]
Post-doc at **Technische Hochschule Ulm, Germany**	[June 2018 to May 2020]
Ph. D. in Interactive Cognitive Env. at **The University of Genova, Italy**	[Oct 2014 to May 2018]
Graphics Software Engineer at **Intel Technology** Pvt Ltd Bangalore India	[July 2011 to May 2014]
Intern at **Intel Technology** Pvt Ltd Bangalore India	[June 2010 to June 2011]

Objective:

My profile includes significant interdisciplinary experience in Artificial Intelligence, Machine Learning, Software Modeling, Robotics, and GPU driver development. I have been an active part of the projects like SOC Intel, Horizon2020, TEAM, Seronet, RobMoSys (Model-Based Development Approach for the Robotics), and K4R (Knowledge4Retail). My abilities include working on interdisciplinary topics, writing technical Scopus-indexed Publications, and communicating and collaborating with international teams and customers. The desire to teach, guide, and supervise young talents keeps me inspired. I wish to take more responsibility for future projects which would be a natural progression from what I have achieved so far.

Experience:

Post Doctorate Researcher at Institute of Artificial Intelligence

The University of Bremen (June 2020 – currently working)

Currently working Knowledge4rRetail project, to create a platform that advances the development and use of AI and the use of service robots in retail. So-called “semantic digital twins” (semdZ) of branches are to serve as the basis for branch and customer-specific solutions in retail branches. K4R platform to support the employees in the store. It applies Artificial Intelligence and Data Analysis to Retail product data. Tasks include adding the ERP data of products to Digital Twin, creating ontologies from the data OWL, and building databases. Provide services in containers (Docker / Kubernetes) to execute queries regarding the knowledge.

Responsibilities:

- Requirement specification and milestone document preparation.
- Responsible for cloud design talks for Semantic Digital Twins and its Infrastructure.
- Extract the knowledge for the Retail Assortments.
- Ownership of API implementation for the Knowledge retrieval and update.
- Ownership of Data Pre-processing and Measurement Units.
- API for Digital Twin queries regarding smart Knowledge.
- Wrote a script to generate Ontologies for the product data.
- To Guide PhDs including Technical writing, code reviews, and project timeline discussions.

Post Doctorate Researcher at Service Robotics Ulm
Technische Hochschule, Ulm, Germany (June 2018 – Feb 2020)

The project SmartSoft is an umbrella term for structures, tooling, infrastructure, and software components to build robotics systems. Includes a systematic software development methodology, best practices, implementations, and software components. The main focus is enabling the flexible composition of building blocks to robotic systems in an ecosystem approach. A collection of building blocks contains building blocks for sensor access, skills, task sequencing, and knowledge representation and helps the immediate composition of a new robotic system.

Responsibilities:

- Robotics Component Development and Porting of the older version to new versions (C, C++)
- SmartSoft Plug-in Development for Eclipse (Java)
- Cloud management for RESTFUL services for Component Sharing between distance systems.
- Interaction with teams and stakeholders with Tutorials, Videos, and presentations
- Training PhDs and Master Students for SmartMDSD (Model Driven Software Development)

Ph.D. Research in Interactive Cognitive Environments
The University of Genova, Italy (Nov 2014 – May 2018)

The motivation of the Research was to motivate vehicle drivers for **driving safely and Green**. The Research Activity was in the domain of the Internet of Things, Artificial Intelligence, and Data support for Automated Cars. The main aim was to create a framework that can support the Gamification of Transportation scenarios like safety, efficiency, and Green Driving. I developed a complete server module, in-car-OSGi-bundles, and RESTful APIs to evaluate the vehicle signals for evaluating the driving pattern of the driver, store the data in databases and Analyze data for recommendations, suggestions, visualizations, and alarms. Framework also had a mechanism for awards and penalty systems for the driving behaviors which in turn adds or removes virtual coins in or from the driver's account. Implemented services by which new **Evaluation algorithms** and **Gamifications** can be plugged in from other developers. Delivered ready-to-execute codes for **REAL TIME DRIVER EVALUATION** for onsite tests at **ASTA ZERO (it is a full-scale independent test environment for future road safety)**, **GOTEBORG**, in **SWEDEN** for conducting multiple tests at different locations and on various car models, including FIAT, Mercedes Benz & BMW. These activities were part of the European project **TEAM** (Tomorrow's Elastic Adaptive Mobility).

Responsibilities:

- Implemented RESTful Services, Configured Servers, and Databases
- OSGi JAR bundles, and developed Sample Android Applications for a testing APIs
- Designed algorithms and Evaluated Vehicle Signals
- Analyzed evaluations for historical and comparative datasets.
- Worked with Geographically diverse teams
- Conducted On-Site Tests and made Data visualizations
- Guided junior Ph.D. students and Master's students in Thesis

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Graphics Software Engineer in Graphics and Parallel Computation Group
Intel Technology Pvt., Ltd., Bangalore, India (July 2011 – May 2014)

Worked as Graphics Software Engineer, in the Graphics and Parallel Computation group which was responsible for the development, debugging, and validation of Graphics driver Display module for small-scale devices including tablets and smartphones. I was actively involved in Graphics driver development, debugging and Product specifications cross-checking on regular basis.

Responsibilities:

- Owned Graphics sub-components component for Development, debugging, and Testing.
- Provided and confirmed Test Coverage for the owned component.
- Debugged Issues and fixed bugs or raised feature change requests.
- Leaded validation execution team and managed execution and reporting.
- Mentored a small team of Debug.
- Designed and reviewed product specification documents.
- Written and reviewed Code change documents & feature change documents
- Guided Interns (Master's and Bachelor's students)

Educational Details:

- **Ph.D. in Interactive Cognitive Environments,**
  University of Genova, Italy
  Oct 2014 to March 2018
- **Master of Technology in Computer Engineering**
  National Institute of Technology, Warangal, India
  June 2009 to July 2011 - 7.84/10
- **Bachelor of Engineering in Computer Engineering**
  Karmaveer Bhaurao Patil College of Engineering, Satara, India
  June 2005 to June 2008 - 68.22%
- **Diploma in Computer Science and Engineering**
  Satara Polytechnic, Satara, Maharashtra, India
  June 2002 to June 2005 - 72.08%

Technical Skills:

C, C++, Java, Python, Robotics, Software Modeling, IoT, Data Mining Machine Learning,
Artificial Intelligence, Eclipse Plugin Development, OSGI, RESTful API, SQL, Git, Technical writing

Notable Achievements:

- All India Rank 500/45000 **(98.80 Percentile**)
  in Graduate Aptitude Test in Engineering (GATE) year: 2009
- Maintained a First Class in M. Tech, B.E., And Diploma.
- Internship in Intel for Project: Hardware Acceleration for Rendering of 3D Objects.

Publications:

Dange, G.R., Paranthaman, P.K., Samaritani, M., Smiai, O., Bellotti, F., Berta, R., De Gloria, A., Marchesoni, M., Massucco, S., Pontow, J., "The Absolute and Social Comparative Analysis of Driver Performance on a Simulated Road Network", in: Games and Learning Alliance: 4th International Conference, GALA 2015, Rome, Italy, December 9-11, 2015, pp. 375–384. doi:10.1007/978-3-319-40216-1_42

G. Dange, P. Paranthaman, F. Bellotti, R. Berta, A. De Gloria and M. Samaritani, - 'Assessment of driver behavior based on Machine learning approaches in a social gaming scenario', in ApplePies International Conference, Rome, 2015.

G. Dange, P. Paranthaman, F. Bellotti, R. Berta, A. De Gloria, Mattia Raffero and Stefan Neumeier – 'Deployment of serious gaming approach for safe and sustainable mobility' in Intelligent Vehicles Symposium (IV), 2017 IEEE

F. Bellotti, R. Berta, A. De Gloria, G. Dange, P. Paranthaman and M. Samaritani, - 'Towards Social Serious Gaming in the IoT Concept and prototype development', in GE 2015 - The 47th annual meeting of the Italian Association of Electronics Group (GE Association), Siena, 2015.

Paranthaman, P.K., Dange, G.R., Bellotti, F., Berta, R., De Gloria, A., - 'In-vehicle Embedded Architecture for Estimation of Green Drive Performance', in GE 2016 - The 48th annual meeting of the Italian Association of Electronics Group (GE Association), Brescia, 2016.

Paranthaman, P.K., Dange, G.R., Bellotti, F., Berta, R., De Gloria, A., Di Zitti, E., Massucco, S., Sciutto, G., "A Serious Game Architecture for Green Mobility", in Applications in Electronics Pervading Industry, Environment and Society,ApplePies Conference , September 15-16 , 2016, Rome, Italy

Paranthaman, P.K., Dange, G.R., Bellotti, F., Berta, R., De Gloria, A.," Gamification of car Driver Performance ",in: Games and Learning Alliance: GALA 2016, Utrecht, Netherlands, December 5-7, 2016

P. Dell' Acqua, F. Bellotti, R. Berta, A. De Gloria, G. Dange, P. Paranthaman, K. Massow and F. Thiele, - 'Safe Drive Map Concept for Road Curve Monitoring', in The 41st Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Funchal, Madeira, Portugal, 2015.

Richardos Drakoulis ; Francesco Bellotti ; Ioannis Bakas ; Riccardo Berta ; Pratheep Kumar Paranthaman ; Gautam Ravindra Dange ; Panagiotis Lytrivis ; Katia Pagle ; Alessandro De Gloria ; Angelos Amditis – 'A Gamified Flexible Transportation Service for On-Demand Public Transport' in IEEE Transactions on Intelligent Transportation Systems (Volume: 19 , Issue: 3 , March 2018)

Pratheep Kumar Paranthaman,Francesco Bellotti, Riccardo Berta, Gautam Dange, Alessandro De Gloria - 'User preferences for a serious game to improve driving' in GALA 2018: Games and Learning Alliance pp 440.

Francesco Bellotti ; Sven Kopetzki ; Riccardo Berta ; Pratheep Kumar Paranthaman ; Gautam Ravindra Dange ; Panagiotis Lytrivis ; Angelos J. Amditis ; Mattia Raffero ; Elina Aittoniemi ; Rafael Basso ; Ilja Radusch ; Alessandro De Gloria – 'TEAM Applications for Collaborative Road Mobility' in IEEE Transactions on Industrial Informatics (Volume: 15 , Issue: 2 , Feb. 2019)

Bellotti, F., Berta, R., De Gloria, A., Dange, G., Paranthaman, P.K., Curatelli, F., Martinengo, C., Barabino, G., Sciutto, G., Demirtzis, E., Hausler, F., "A Smart Mobility Serious Game Concept and Business Development Study", in: Games and Learning Alliance: 4th International Conference, GALA 2015, Rome, Italy, December 9-11, 2015, pp. 385–392. doi:10.1007/978-3-319-40216-1_43