RAMACHANDRA KOTA

ramachandra@gmail.com (+91) 9491885613 http://www.linkedin.com/in/ramachandra

PROFILE SUMMARY

- Holding an **Open Work Permit** for Canada and moving to Vancouver in Aug 2017.
- More than **6 years of experience** in Artificial Intelligence, Machine Learning, Smart Grid and IoT.
- Co-authored over **20 publications** in top-rated conferences and journals in AI, Machine Learning & Energy.
- Co-inventor of **7 patents filed** in USPTO related to Smart Grid, Chatbots and Blockchain technologies.
- Member of the program committee and reviewer for several international AI conferences and journals.
- Extensive international exposure having worked as Project Lead in the UK and India on several collaborations with industrial clients and academic partnerships across the world.

WORK EXPERIENCE

IBM RESEARCH
DEC 2014 - PRESENT

***Research Scientist**, Cognitive IoT Solutions* — *Bangalore, India*

Leading client engagements and research initiatives with underlying theme of applying **Artificial Intelligence**, **Machine Learning** and **Big-Data Analytics** for Cyber-Physical Systems such as Smart Grid and Internet-of-Things.

- **Connectivity Models (CM):** Technical coordinator for an engagement with DTE Energy, USA on inference and correction of the network connectivity of distribution grids using geospatial and electrical data.
  - Designed learning and optimization based algorithms that improved accuracy by **40%** over the baseline.
  - Implemented the proven solutions as a software application that has been deployed at the client premises. The application is now included in the **energy solutions offered by IBM**.
- **OPTi Project:** Heading 4-member team in the **€ 2M** EU project on District Heating & Cooling (DHC) Systems.
  - Developed hybrid approaches to model & predict energy consumption of buildings in DHC networks.
  - Coordinating the experiments and validation across the pilot sites in Sweden and Spain.
- **Renewable Energy Forecasting:** Leading an ongoing research project on prediction of solar irradiance and power generation of solar plants in India based on weather forecast models and historical measurements.
  - Developed a machine learning based method to appropriately fuse forecasts of various weather models.
  - Devised a data-driven irradiance model that boosted prediction accuracy by **50%** over current methods**.**
- **Conversational Systems:** Initiated a research project with two colleagues focusing on IBM Watson services
  - Building a tool over Watson Conversation Service for generating data-driven, dynamic UI for chatbots.
  - Conducted user-study on the design and utility of Messenger chatbots popular in various categories.
- Awarded IBM's **Outstanding Technical Achievement Award** (OTAA) for contribution to the CM project.
- Awarded **2 Team Accomplishments** by IBM for Customer Offering & Accelerated Market Introduction.

SHOWT (GLOBAL STEALTHCO)
JUL 2014 - DEC 2014

Principal Scientist — *Hyderabad, India*

Showt is a stealth-mode startup headquartered in Hong Kong with team members distributed across the world.

Headed the teams working on the AI and Data Science aspects of the product – a worldwide voting platform.

- Developed the search functionality based on user activities and externally scrapped data. Also, designed and led the development of **real-time analytics** such as trend analysis and summarization in the platform.
- Some of the technologies used were AWS, Cassandra, Ruby, PHP, Redis and MongoDB.

SECURE METERS (UK) LTD. FEB 2010 - APR 2012

Research Engineer *Winchester, UK*

Secure Meters Ltd. is a leading MNC providing smart solutions for energy measurement and management.

Worked with the top management (CTO & Chief Scientist) at Secure Meters on new R&D initiatives to apply AI, Machine Learning & Multi-Agent systems to drive innovation and build in-house expertise in Smart Grid.

- **Company Liaison:** Was the sole representative of the company on two vital academic-industrial projects.
- **iDEaS Project** – An engagement worth **£ 1M** with University of Southampton focusing on decentralized control, operation and efficient management of future generation electricity networks and smart homes.
- Orchid – A UK Govt. project worth **£ 5.5M** involving Universities of Oxford, Nottingham, Southampton and BAE Systems to develop multi-disciplinary approaches for the domains of disaster response and smart grid.

UNIVERSITY OF SOUTHAMPTON FEB 2010 - JAN 2014

***Visiting Research Fellow**, Agents, Interactions & Complexity Research Group* *Southampton, UK*

Collaborated with university researchers based on the iDEaS and Orchid projects with Secure Meters Ltd.

- **Automated Home Energy Management System:** Developed solutions for optimizing energy usage of HVAC systems based on localized weather modelling and user behavior using machine learning techniques.
- **Game-theoretic Solutions:** Designed pricing mechanisms for formation and operation of cooperatives of small renewable producers, storage providers (like EVs) and consumers participating in energy markets.

EDUCATION

PH.D., COMPUTER SCIENCE UNIVERSITY OF SOUTHAMPTON, UK

***Advisors:** Prof. Nick Jennings & Dr. Nick Gibbins* 2006 - 2009

***Thesis Topic:** 'Self-Adapting Agent Organisations'* ***Field:** Artificial Intelligence*

- Research focused on self-organisation in Multi-Agent Systems and proposed decentralized adaptation methods for task-oriented networks. Application domains include grid computing and autonomic systems.
- Nominated for **best student paper award** at AAMAS '09, a top-rated international AI conference.

B.TECH (HONS), COMPUTER SCIENCE & ENGINEERING IIIT HYDERABAD, INDIA

CGPA: 8.97/10 2002 - 2006

- Led the university team *Kshitij* in RoboCup 2005 at Osaka in the *Rescue Simulation League* and **won 3rd position.** RoboCup is an annual international event promoting research in Robotics. *Kshitij* was the only Indian team among the 30 university teams from across the world that qualified to the league that year.
- Represented IIIT Hyderabad in *ACM Inter Collegiate Programming Contest, Asia Regional* in 2005.
- Head of the Organizing Committee of "Threads", the technical college festival in 2005. It hosted more than 10,000 participants from local, national and international institutes.
- Listed in the IIIT Hyderabad Dean's Scholarship List for all 8 semesters (*top 5%*).

RESEARCH & TECHNICAL SKILLS

- Java, C/C++, Python, R, Spark, TensorFlow, MATLAB/Octave, Shell scripting, SQL, NoSQL (MongoDB)
- Over 20 peer-reviewed publications - detailed list available at **http://mythalez.net/publications.html**