

Paul Peng Deng

Full Stack Internet of Things (IoT) Application Engineer

Melbourne Australia - 0402 837 152 - <https://dengpeng.de> - paul@dengpeng.de - <http://au.linkedin.com/in/pengdeng/>

Summary

Embedded
+
Cloud

I am a software engineer of Internet of Things:

- *Cloud: AWS Certified Solution Architect and Developer*
- *IoT/M2M: 10 years IoT/M2M smart devices design, implementation, test experience*

Also with proven records of innovation:

- *More than 30k devices deployed in field and working*
- *Finalist of Australian Innovation Challenge 2011*
- *1 software algorithm patent*
- *5 publications, including 3 tech books*
- *1st ZigBee packet decoder; 1st Vic Gov approved IHD*

Experience

10 Years

Embedded Engineer

Freestyle Technology

2015 - Present

- ZigBee SE, DNP3, LoRaWAN, WiSUN, NB-IoT, RS485, I²C, modbus, device driver, application design and development
- AWS, MQTT, InfluxDB, Grafana, NodeJS, Python, CoAP

Senior Software Engineer

Intercel

2010 - 2015

- Intercel AWS cloud based Energy Analytics Engine system architecting, implementation
- ZigBee Smart Energy eKo In-Home Display design, implementation and test
- 4 websites based on WordPress

Software Engineer

Daintree Networks

2008 - 2010

- Implement and maintain wireless protocol decoder in Sensor Network Analyzer
- Test ZigBee Commercial Building Automation profile enabled Wireless Lighting Control system

Research Assistant

University of Melbourne

2008 - 2010

- Developer of IBES funded Royal Children's Hospital Ambient Light Orb research project
- Developer of IBES funded Gardens of Tomorrow research project
- Main developer of CLOUDS SensorWeb 3.1
- Developer of DSTO funded Dust Sensing research project
- Sensor based gesture recognition framework

Innovations

1 Patent
2 Awards

Patent: NZ 603246

P. Deng, L. K. W. Law

2014

A method for estimating electricity consumption cost based on data received from an electricity meter

A fault-tolerant adaptive prediction algorithm running on an embedded edge platform

Finalist: Shell Australian Innovation Challenge

F. Vetere, J. Green, A. Nisselle, X. T. Dang, T. Zazryn, *P. Deng*

2011

Absent Classmate

Children spending long periods in hospital could now have help keeping their social networks intact, thanks to technology enabling them to connect with classmates and teachers.

Publications

6 Publications

Book Chapter: Sensor Web

T. Kobialka, R. Buyya, *P. Deng*, L. Kulik, M. Palaniswami

2009

Integration of Sensor Networks with Web and Cyber Infrastructure
Connect physical world to cyber world

IoT with Arduino Blueprints AWS Administration Guide

Technical Reviewer

Packet Publishing

2015 - 2016

Technical Skills

3 Certificates

AWS ASA-5011, ADEV-567

EC2, S3, SQS, Lambda, Route 53, Cloud Watch

AWS Certified Solutions Architect and Developer.

Big Data and Machine Learning

Time Series Data Classification, Recommendation systems, Linear Regression

Develop machine learning algorithms to process big data from smart meters. Develop patented algorithm running on IHD device to predict energy and cost consumption under the Time of Use tariff model.

IoT/M2M Smart Device Development

Raspberry Pi, ESP8266, ESP32, STM32, ATSAM4 ...

Rapid prototype internet enabled sensors and actuators to interact and solve physical world problems, e.g. Children psychological, SCADA.

IoT/M2M Wireless Protocols

ZigBee, 3G/4G, LoRaWAN, NB-IoT, MQTTs, CoAP, Wi-Fi ...

Develop and maintain the Flexible Decode Engine in Sensor Network Analyzer; prototype Iridium and 3G dual mode smart router.

Web Frontend and Backend

Wordpress, Node Red, LAMP, Angular ...

1 enterprise Wordpress websites, 3 embedded device product websites.

Education

University of Melbourne

Master of Engineering in Distributed Computing, 2008

Supervisor: Dr. Lars Kulik

Projects and Language

End to end IoT and Big Data Cloud projects with customers

C, NodeJS, Python, Java, C#

Find out More at <https://dengpeng.de/>