Thanujun Pudkarananthan

Term Address: 49 D, New Road, Peterborough, PE29HD
Telephone: 07522129011 E-mail: thanujun.pudkarananthan@gmail.com
Date of Birth: 26 Mai 1991 French nationality

PROFILE

I have 3.5 years of experience in model development and have a strong background and experience in OEM powertrain control testing and validation process mainly in HIL environment. I would like to work in a control software development to make the best of my technical expertise.

SKILLS

Autonomous, problem solver and team player .
Experience in:
Software development, model development and integration, Hardware in the Loop rig and Test cell commissioning, simulation, auto-coding, embedded c, test and validation of real time embedded systems, Network communication protocol (CAN, LIN, FlexRay, J1939), interaction with stakeholders.
HIL: Dspace (Control desk, Configuration desk, Automation Desk), ETAS INCA/MDA, ATI Vision, Canape, Vector CANalyser .
Diagnostic engineering tool. BOSCH EMS Strategy book.
Programming and Simulation: Matlab/Simulink, Python, AMESim, 20-sim, Labview, Arduino, Xcode ,
CAD/CAE: CATIA, Solidworks, Rhino, Autocad, ME'scope, COMSOL.
Office: Powerpoint, Excel, Word, Access
Process and Management tools: CRETA**,** SVN, JIRA, ASANA, TARGET PROCESS
Operating Systems: Windows, Mac OS
Languages: French - Tamil (Bilingual) -English (Fluent) - Russian (beginner) - German (beginner)

EMPLOYMENT HISTORY

Mars 2018-Present

Caterpillar, Peterborough, UK
System and Validation Engineer- Freelancer
I am currently working on a system level for Large engines software development at CAT Marine. This involve requirement capture, design and adaptation of control software for engine controls. I am also responsible for validation activities and I am currently designing test plans for software testing. The different activities involve using different tools such as Matlab/Simulink, CANalyzer ,CANape and CAT service tool.

Febr 2016-Mars 2018

Jaguar Land Rover, West Midlands, UK
Hybrid Hardware in the loop Development Engineer - Freelancer
As a HIL developer engineer, I was responsible for commissioning HIL simulator for Hybrid Powertrain projects. I was in charge of setting up HIL for Powertrain Control Module for Software testing and Validation. The tasks consisted of hardware implementation, network simulation, HIL/PCM Calibration, MIL, plant model development and integration for real time execution and tool creation in MATLAB scripts for model generation. The good delivery of projects is also depending on the communication and liaison with other teams and department that I provide.

Aug 2015-Febr 2016

Altran, Ford, Coventry, UK
Hardware in the loop Engineer
As a HIL engineer, I was in charge of Software validation for Diesel Engine using Dspace Scalexio and PHS Rigs and other software such as ATI Vision, Dspace Control Desk, Configuration Desk, Automation Desk, Matlab and Python. The project consisted of testing PCM according to the different features such as stop/start, cruise control or torque control. The features are validated depending on the requested Design Validation Method. The results were sent with a report containing the test specification. Multiple softwares and calibrations releases needed to be validated within a short times scales.

Sept 2012-Febr 2013

University Politehnica of Bucharest, Romania.
Research Assistant Engineer (Placement)
The aim of the project was to design an active and semi-active control systems in order to control the vibration modes with a PHD student. The main study involved on understanding the single degree of freedom systems using a speaker model that combines mechanical and electrical characteristics. My main responsibility was to study the vibration phenomenon using ME'scope and developed mechatronics models using Matlab/Simulink.

EDUCATION & QUALIFICATIONS

2013 - 2014

Cranfield University, Bedfordshire, UK
MSc in Automotive Mechatronics
Core Modules: Vehicle Concepts and Performance, Vehicle Dynamics, Ride and Handling, Automotive Control and Simulation, Mechatronic Modelling for Automotive Systems, Advanced Control and Optimization, Implementation of Automotive Control Systems, Powertrain Systems, Vehicle Electrification and Hybridisation.
Group Project: Hybridisation of a SUV Range rover Evoque
The purpose of the project was to design a concept hybrid electric vehicle with a series or parallel powertrain architecture via carrying out a feasibility study of implementing an appropriate electric only range, gradability, speed, level of acceleration and HEV topology via using competitor intelligence. Furthermore we had developed the hybrid powertrain control systems with regenerative braking using inputs of the vehicle performance, driveability and implementing the high-level control strategies.
Thesis: Brake-by-Wire implementation of an Electronic Brake Distribution
Design and modelling of a control system using the vehicle brake distribution via optimizing the pitch and heave motion of a Brake by wire application, in order to implement smoother braking. The project involved the studies of the vehicle dynamics and an implementation of an LQR control.

2011 - 2015

University of technology of Belfort-Montbéliard., France
Diplôme d`ingénieur en mécanique (Mechanical Engineering master degree)
Core Modules: Stress Analysis, Dynamics & Control engineering, Continuum mechanics, Fluids mechanics, CAD Techniques, Project Management, Actuator and sensor, Signal processing, Electronics engineering, Bond Graph.
Group Project: 'Design of a Bench grinder"
Project involved in the design and animation of a Bench Grinder using CATIA V5. This required us in designing the components and implementing the parametric and kinetic models and carried out structural analysis using the CATIA V5 FEA tools.

2009 - 2011

University Institute of technology of Ville d`Avray, Paris, France
DUT Génie Mécanique et Productique, College diploma of Mechanical engineering and computer aided manufacturing
Core modules: Design office, general mechanics and dynamics, material science, manufacturing, automation and electronics, structural analysis.
Group project: Design and developing of a transmission system of a Savonius wind turbine for AMIKO using CAD and improve the energy-harvesting rate.

2006 - 2009

Lycée Charles de Gaulle, Rosny sous bois, France
Baccalaureat Scientifique option science de l'ingénieur (equivalent of French high school national exam with a major in engineering science)

ACTIVITIES & INTERESTS

I like to keep fit during my spare time and play Basket-ball and Tennis. Also attend the gym regularly.
I have a growing interest in electric and hybrid vehicles and attend some automotive shows.
Actively travel around the world during vacations: USA, Australia, Sri Lanka, Italy, Germany Canada,.
Possess full clean French Driving licence.