

Sivasathivel Kandasamy

E-Mail: sivasathivel@yahoo.com

Objective

My career objective is to pursue a career in research and development in the areas of Electromagnetic Theory, Radar/Satellite Systems, Multi-Robotic systems and self-reconfiguring systems.

Experience

Seebyte Ltd, Edinburgh, UK

June 2008 – August 2009

Seebyte is a company specializing in underwater robotics and I was given an internship opportunity to work on one of their projects. I was working on Salient Target Detection Algorithms for use on Video and Sonar Imagery. The project posed great technical challenges, since the targets in video and sonar images have different properties and the objective is to achieve detection with out any a-priori knowledge of the environment or the target. The work was completed with the submission of the technical report in August 2008

Tata Consultancy Services, Chennai, India

June 2006 – August 2007

I was employed as an Assistant Systems Engineer during this tenure and was leading a team of 6 Engineer in developing and maintaining the Savings Time Deposit and related applications for Bank of America. The applications were developed and maintained in Mainframe Applications

Cognizant Technology Solutions, Chennai, India

May 2004 – June 2006

Was employed as a Programmer Analyst during this period and was working for our client, METLIFE. During this tenure, I was in three applications/projects, first as a team member and as the module leader. I was trained in Mainframe Technologies in the Cognizant In-house training facility. During this period, I automated many processes and was instrumental in saving effort in my project and also the key person in designing and developing many programs for one of the applications that enabled Cognizant to deliver the products before the actual date of completion of the project. Also, I handled classes on REXX, a widely used language for automation in Mainframes, for employees from other projects.

Sri Manakula Vinayagar Engineering College, Pondicherry, India

July 2003 – Nov 2003

I was employed as a lecturer in the Department of Electronics and Communication Engineering immediately after my final B. Tech exam and was handling Electromagnetic and waveguide theory, Microwave Engineering and Basic Electronics for B. Tech Students in Electronic and Communication Engineering

Education

MSc. In Vision and Robotics (VIBOT)

September 2007 – June 2009

I currently a graduate student pursuing my Masters in Computer Vision and Robotics. The course contents are more oriented towards computer vision and covers autonomous robotics along with the fundamentals of robotics. The course is expected to complete on June 2009 with our project defense in Edinburgh.

My current aggregate is 15.917/20

Universities:

1. Heriot-Watt University, Edinburgh, UK
2. Universitat De Girona, Spain
3. Universitaire De Bourgogne, France

Subjects and Scores:

Subject	Score	Credits
Digital Signal Processing	85 / 100	6
Software Engineering	69 / 100	6
Data Mining and Machine Learning	90 / 100	6
Writing in English and Cultural Studies	64 / 100	6
Image Compression and Communication	85 / 100	3
Image Processing – Introduction	84 / 100	3
Fundamentals on Robotics	7.5 / 10	6
Autonomous Robots	6.5 / 10	5
Scene Segmentation and Interpretation	9 / 10	6
Visual Perception	8.5 / 10	6
Real-Time Image Processing	8.5 / 10	5
Local Culture	8.5 / 10	2

* Currently in third Semester and hence evaluations are not available.

Some of the Projects / Course-works of interest:

1. Software Engineering Project was to develop software in Linux using OpenCv for Image processing. The software acquires images using a web-camera and performs functions like

flipping the image, rotating the imaging, enlarging the image and shrinking, noise removal, etc

2. The course work on Machine Learning and Data Mining was to develop identify the fashion in Second Life using the Machine Learning methods learnt. This project was completed using Baye's classifier.
3. The project on Autonomous Robotics was to develop autonomous navigation for an e-puck robot in Webots software. Three tasks were to be accomplished. In the first task, the robot is to navigate towards a light source. The second task for the robot is to reach a goal position by avoiding obstacles. In these two tasks the starting position and orientation of the robot is given. IN the third task, there is no information on the starting position and orientation of the robot. But the robot is to reach a goal position by following the light source and avoiding obstacles.
4. The project on Scene Segmentation and Interpretation was to classify the objects images. The Pascal Challenge 2006 was given as the course work with a reduced set of datasets for training the classifier and validation. Testing of performance was performed using a different set of images.
5. The project on Real-Time Imaging was to track a hand and count the fingers. The project was developed using a RC10 development boards and Celoxica's Handle C

MSc. Project Thesis:

- "Optimization and Validation of Image parameters for a future satellite sensor dedicated to soil science: Mapping of soils and their moisture" under the supervision of Prof. Audrey Roman.

The sensors in the latest generation of satellites could record reflectance in a large number of spectral bands. However, all these information are required and the amount of information required usually depends upon the application. The purpose of the satellite sensor is to gain information so as enable the classification of the different types of soils and also produce moisture map in these soils. The project intends to:

- Find the spectral bands out of the 88 available bands that have satisfactory classification power for the classification of soils
- Prepare a soil moisture map from the reflectance information of the soils in these 88 spectral bands
- Find an appropriate spatial resolution for classification of soils.

Too much information not only increases the computational and equipment cost but also could prove detrimental by introducing outlier information. The outcome of the project would help one to chose the appropriate spectral bands and spatial resolution for the purpose of soil classification and obtain a soil map of the soil under consideration from their hyper-spectral data.

B.Tech in Electronics and Communication Engineering

August 1999 – June 2003

College: Pondicherry Engineering College, Pondicherry, India

University: Pondicherry University, Pondicherry, India

Aggregate: 77%

B.Tech Project: "Design of a Digital Beam Forming Radar for studies on Atmospheric Boundary Layers"

The project witnessed the extensive study and design of the antenna systems with a simulation of the overall system. A novel BPSK demodulator using Xilinx FPGA was also designed.

Self-Motivated projects and accolades:

1. Developed a small code using assembly language that acted as an OS and provided an interface between the keyboard and monitor of my PC.
2. First Prize in the Computer Programming Contest held in a National Level Student Symposium held in Sri Sai Ram Engineering College, Chennai, India
3. First Prize for my paper on a conceptual design of an autonomous missile in a National Level Student Symposium held in Sri Manakula Vinayagar Engineering College, Pondicherry, India
4. Second Prize in Software Marketing Contest held in Hindustan College of Engineering in a National Level Symposium.

Publications

- ✚ K. Siva Sathivel, R. Nakkeeran, G. Vaidyanathan, "Can Invisibility be made realistic?", Bulletin of Pure and Applied Sciences, Vol.21D (No.2) 2002; p.101-104
- ✚ R.Nakkeeran, K. Siva Sathivel, "Quantum Heterostructure Antennas", Proceedings of the SPIE, Volume 5118, pp. 639-645 (2003).
- ✚ <http://www.southasiaanalysis.org/papers14/paper1325.html> - Published Online in the Think-Tank on Strategic Affairs
- ✚ K. Siva Sathivel, "A Simple Algorithm for Encrypting Large Data Blocks", Proceedings on International Conference on Information Security 2005 held at Pondicherry, India.
- ✚ V.Prithviraj, K. Siva Sathivel, V. Balakishnaraja, B. Satish Kumar, et.al "Digital Beam Forming Phased Array Radar for Studies on Atmospheric Boundary Layers", Proceedings on RF Base Band 2005 conducted at Thiagarajar College of Engineering, Madurai, India
- ✚ <http://www.southasiaanalysis.org/papers31/paper3025.html> - Published Online in the Think-Tank South Asian Analysis Group

Skills

- ✚ Programming in C/C++
- ✚ MATLAB
- ✚ VHDL and ModelSIM
- ✚ Basic Knowledge in HTML and Javascript

✚ Mainframe Technologies:

- COBOL, REXX, JCL
- VSAM and DB2

✚ Working knowledge in Handle-C

✚ Working Knowledge in Cocoa in Mac machines (Beginner).

Certifications

1. Project Management 2005 certification from Brainbench
2. Cognizant Certified Life Insurance Professional – Level 1

Professional Accomplishments

1. Appreciated by Clients (Bank of America), Project Leader, Project Manager, Project Management Office and Business Relationship Manager for solving the following issues which were with the team unsolved even before my joining TCS:
 - a. Force Interest Payment – For some accounts interest was force paid at year end instead of term end which is not be the case. All efforts by the team to find the reason for this issue proved futile. The team was working with this issue for more than 6 months before I joined the project and was solved by me after joining the project
 - b. Address Update of Closed Accounts – This was a query raised by the Business Counterparts on whether Address update could be made for closed accounts. Answering this query proved to be a Herculean task due to the program complexity of the programs and the huge number of programs involved in the analysis. This query was also pending with the team when I took it up and solved it.
 - c. Record Error – In IMPAC application, in one of the files, the sum of the individual amounts in the records did not match that in the trailer. This was pending with the team for about a week and solved by me in a couple of days.
2. Appreciated by On-Site Coordinator, Project Lead, Project Manager and the member of the Project, METLIFE-IDI at Cognizant Technology Solutions for my activities:
 - a. Preparation of Test Data for testing. The complexity is due to the inter-relationship in data and our intention to have minimum amount of test data for testing. The Analysis, test data and test plan even before the enhancements, which marked a start of a new approach in testing in Cognizant. This approach ensured our enhancements to pass the User Acceptance Testing with ease.
 - b. The Main Billing Program of the IDI application which happened to be the most complex part of the project was analyzed by me and a program to include this functionality in the METLIFE applications was designed and coded by me
 - c. Designed and coded almost 95% of all the new programs created.
 - d. Came up with a Knowledge Repository Site for our Project. This site was developed using JavaScript
 - e. Has handled two REXX sessions for Cognizant Employees that fetched a feedback of 85.71% and 90.66% respectively.
3. Appreciated by On-Site Coordinator, Project Lead, Project Manager and members of the team of the Project METLIFE-GIDV at Cognizant Technology Solutions for my activities:
 - a. Automated the Inbound Outbound Statistics, METFACS shutdown Activity, and Creating copybooks for analysis for our project which resulted in saving several person hours of effort

- b. Had been in close association with Cognizant Academy and have evaluated Technical question papers for use in Entry-Level and Project-Specific Training Tests
- c. Found a coding solution for preventing ABENDS (abnormal program termination) due to empty datasets in a SORT Job
- d. Came up with a program to mail the PDS from mainframe which resulted in effort saving.

Tests

TOEFL-iBT

- o Listening – 30
- o Writing – 30
- o Reading – 27
- o Speaking – 23
- o Total - 110

GRE – General Test

- o Quantitative Score – 650
- o Verbal Score – 450
- o Analytical Score – 4.5/6

Refrees

-  Prof. Fabrice Meriaudeau, Universitaire De Bourgogne, fabrice.meriaudeau@u-bourgogne.fr
-  Dr. Scott Reed, Technologies Development Manager, Seebyte Pvt. Ltd., scott.reed@seebyte.com
-  Dr. Pierre-Yves Mignotte, Principal Supervisor, Seebyte Pvt. Ltd., pierre-yves.mignotte@seebyte.com
-  Dr. Prithviraj, Principal, Pondicherry Engineering College, profvpraj@pec.edu
-  Dr. Srinivasan Emperumal, Pondicherry Engineering College, esrinivasan2004@yahoo.co.in

Preferred contact: sivasathivel@yahoo.com