

KARAN JAYACHANDRA

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SUMMARY

I aim to build expertise as an Engineer and enjoy working with challenging organizational goals. This helps push me to be a better developer and also required me to think out of the box. I enjoy seeing the things I make have an impact on the world. I have a strong sense of ownership and will take any steps needed to meet the agreed upon objectives. My strengths lie in learning quickly, taking ownership and have a strong self of motivation. The things I am working on improving relate to sustaining work on a single focused objective.

EXPERIENCE

NXP Semiconductors

Signal Processing Engineer

September 2021 - Present

Eindhoven, The Netherlands

- **Key Learning:** How to get from a requirement to a product which was a Radar System
- Understand and work with stakeholders to translate high level requirements to technical requirements.
- Work with external teams to understand and develop a complex system with several components.
- Create models of the Radar System to simulate behaviour before hardware availability.
- Develop algorithms for Radar Systems that are used to estimate target parameters.
- Development of test suite to evaluate algorithms statistically.

NXP Semiconductors

Thesis Student / Intern

August 2020 - August 2021

Eindhoven, The Netherlands

- **Key Learning:** How to work with Automotive Radar, Obtain Work Experience in research oriented teams
- Developed automotive scenarios for simulations using the dSpace Tool Chain Suite
- Data from dSpace provides information about reflections in the environment for transmitted waves.
- Removing data based on Radar Detection Capabilities and Clustering data based on Radar Resolution Capabilities.
- Collaborated with different teams to help develop using the simulation software and understand it's capabilities

SAP India Pvt. Ltd.

Associate Business Process Consultant

April 2019 - July 2019

Bengaluru, India

- **Key Learning:** How to take ownership of solutions, meet clients' requirements and expectations through time management and organization
- Development ownership and capturing complex client requirement

SAP India Pvt. Ltd.

Associate Development Consultant

August 2016 - March 2019

Bengaluru, India

- **Key Learning:** How to work with a global team, problem solving and understanding professional responsibility
- Green Field Projects: Implement financial analytics, develop database queries, leverage IoT technology to track fleet movement
- Brown Field Projects: Upgrade database and database software
- Conduct client training, creating demos for showcasing, working with a global team and on solo projects

Defence Research and Development Organization

Intern

April 2012 - July 2012

Bengaluru, India

- **Key Learning:** How to work in a professional environment and work towards any deliverables
- Fingerprinted FPGAs based on the Physical Structure determines the gate delay
- FPGAs were uniquely identified as no two FPGAs would have exactly the same crystal structure.

PROJECTS

Master Thesis, TU Delft

Keywords: Kalman Filters, Resource Management

Thesis research investigating joint communication and sensing for automotive Radar Systems. RRM Optimization problem involving antenna arrays in a multi-sensor environment. Generate a globally optimal understanding of the environment by distributing Radar Resources

Bachelor Thesis, Amrita Vishwa Vidyapeetham

Keywords: Neural Networks, Antenna Design, FANN

Using Neural Networks, an antenna array, consisting of antennas placed in different orientations, was trained to pick up the location of an object emitting signals. Training to estimate the location of the object based on the signal strength at each of the antennas.

Compressed Sensing, TU Delft

Keywords: Compressed Sensing, Convex Optimization

Recover signal that has been sampled at a rate which was much lesser than that prescribed by the Nyquist-Shannon Theorem. Signal reconstruction using Norm Minimization and a Low Complexity Algorithm was implemented. Perfect reconstruction of the signal was possible due to sparse nature of the signal.

EDUCATION

Technische Universiteit Delft, Delft

2019 - 2021

M.S. in Electrical Engineering

Major in Signals and Systems

Overall GPA: 8.5

Focus: Signal Processing, Radar Systems and Antenna Design

Courses: Radar Systems, Antenna Systems, Electro-magnetics, Information Theory, Control System Design, Estimation & Detection, Ultra-Wide Band Systems, Applied Convex Optimization, Statistical Digital Signal Processing, Signal Processing for Communication, Microwave, Radar and Remote Sensing, Introduction to Wireless Communication

Amrita Vishwa Vidyapeetham, Bengaluru

2012 - 2016

B.Tech in Electronics and Communication Engineering

Overall GPA: 8.6

Focus: Signal Processing, Radar Systems and Antenna Design

Courses: Signals and Systems, Digital Signal Processing, Wireless Communication, Radio Frequency Engineering, Analogue and Digital Communication, Microcontrollers and Microprocessors, Transmission Lines and Radiating Systems, Information Theory and Coding Techniques

RECOGNITION

Awards SAP Project of the Quarter Q1-2018, SAP Project of the Quarter Q2-2019

Papers Second position at International Radar Conference Sydney

SKILLS

MATLAB Extensively worked on scripting for algorithm development and data generation

Python Testing and data modelling experience as part of a package development

C/C++ Mostly used to create small scripts to interface with other programs

Verilog Basic experience as part of an internship to create simple components,