

# **Chinmay Nandan Samant**

**Contact Details:** 2, Place Lamartine, Illkirch, 67400, France  
Email: [chinmaynsamant@gmail.com](mailto:chinmaynsamant@gmail.com) Phone: +33 605929227

## **RESEARCH INTERESTS**

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Medical Imaging, Computer Vision, Machine Learning

## **EDUCATION**

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<b>Research Engineer, PhD Student</b> <b>SIEMENS-HEALTHCARE, ICUBE-CNRS, University of Strasbourg</b>	Strasbourg, France Nov 2015 - Current
• Ultrasound laparoscopic guidance for minimally invasive surgery, biopsy, and ablation procedures	
• IMU-Camera information fusion for advanced indoor positioning.	
<b>Masters in Computer Vision (Erasmus Mundus Vision &amp; Robotics)</b> <b>University of Bourgogne-FrancheComté</b>	Le Creusot, France Sept 2013 - Aug 2015
• Medical Imaging, Image Processing, Scene Segmentation and interpretation, Visual Tracking, Machine Learning, Neural Networks	
• Autonomous, Probabilistic Robotics, Self-calibration, Localization, Computer Vision, 3D reconstruction/ registration, Visual Servoing	
<b>Masters in Electronic Science</b> <b>University of Pune</b>	Pune, India Aug 2010 - Apr 2012
• Embedded systems design, Digital Signal Processing	
• Analog, power electronics design	
<b>Bachelors in Electronic Science</b> <b>University of Pune</b>	Pune, India Aug 2007 - Apr 2010
• Minors: Mathematics, Physics, Statistics	

## **WORK EXPERIENCE**

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<b>SIEMENS-HEALTHCARE, France</b> <b>Engineer</b> Localization and tracking of Laparoscopic Ultrasound Probe	Nov 2015 - Present
<b>ICUBE-CNRS, France</b> <b>Research Engineer</b> Software development for marker tracking in MRI	Aug 2015 - Oct 2015
<b>ICUBE-CNRS, University of Strasbourg, France</b> <b>Intern</b> Real-time marker segmentation and tracking in MRI	Feb 2015 - Jul 2015
<b>LE2i-CNRS, University of Bourgogne, France</b> <b>Intern</b> Wood texture analysis and classification	Jul 2014 - Aug 2014
<b>Center for Sensor Studies, University of Pune, India</b> <b>Research Assistant</b> Ultrasonic Transducer Applications	Jul 2012 - Jun 2013

## **PROJECT EXPERIENCE**

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### **Medical imaging tool for object volume reconstruction**

- A MATLAB tool for manual segmentation and volume reconstruction in medical images

### **3D reconstruction simulation tool for pattern projection based active camera systems**

- Simulation of a camera and projector system for virtual 3D reconstruction

### **FPGA based signal processing module**

- Temperature signal processing module, VGA display and other controls

### **Robotics surveillance**

- Autonomous robotic surveillance with Turtlebot based of ROS.

### **Wavelets based compression and filtering**

- Image analysis with wavelets and its applications

### **Single View Metrology tool for Height estimation**

- A MATLAB tool for depth and height estimation using a single webcam

### **Kohonen network learning for classification of patient data**

- Implementation in MATLAB to classify complex patient movement data

### **Computer Vision/Image Processing Toolbox**

- Implemented in OpenCV and MATLAB, built with complete user interface for Images, Videos and Live camera feed.

### **PCA based face recognition**

- PCA was implemented to detect faces out of pool of images. Implemented in MATLAB.

### **Interactive Map Software**

- Google maps alike offline map software created for Le Creusot, using OpenCV and MATLAB.

### **Masters in Electronics Thesis: Non-Contact Liquid Level Measurement using Ultrasonic Sensors**

- An Ultrasonic Sensor system was developed to measure liquid level without contact.

## **SKILLS**

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- Computer Languages: C/C++, MATLAB, Assembly, VHDL, Python
- Electronics: Microcontroller Programming, Hardware Design

## **ADDITIONAL**

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Fluent in English, Marathi, Hindi. French Basic; Hobbies: Tech gadget analysis & testing, music & sports