

- Characterization of pulmonary edema in radiographs
  - Chest x-ray with pulmonary edema of various degrees was distinguished from normal chest x-ray using texture analysis and machine learning algorithms.

**Visiting Scientist**

**Nov 2008- Sept 2011**

**University of Washington, Seattle, WA**

- Design of an implant for 1<sup>st</sup> metatarsophalangeal joint
  - First metatarsophalangeal joint morphology was characterized using its 3D virtual model acquired with laser scanner. Implants of various sizes were designed based on the 3D structure of the joint, using optimization and computational geometry techniques.
- Cartilage thickness measurement in MRI images
  - Cartilage region in 14T MRI images of first metatarsal head was segmented and its thickness profile in three dimensions was measured, using image processing and computational geometry techniques.

**Research Assistant**

**Cleveland Clinic, Cleveland, OH**

**Oct 2007-Oct 2008**

- Design of an implant for 1<sup>st</sup> metatarsophalangeal joint
  - Acquisition of 3D surface image of 1<sup>st</sup> metatarsal and phalanx bones using 3D laser scanner was done. A study protocol for the design of 1<sup>st</sup> metatarsophalangeal joint implant was designed.

**Junior Specialist**

**University of California, San Francisco, CA**

**May 2006 - Oct 2006**

- Study of auditory feedback processing in brain
  - Acquisition of magnetoencephalographic and MRI data, and its analysis was done to investigate auditory feedback.

**General Practitioner**

**B.C.Roy Technology Hospital, Kharagpur, India**

**July 2004 - May 2006**

- Management of patients in clinics, wards and emergencies of the Hospital.

**Trainee**

**All India Institute of Medical Sciences, Delhi, India**

**May 2005- July 2005**

- Assisted in collecting and analyzing MRI and MR spectroscopy data for quantification of metabolites in motor area of brain during activation.

**Junior Resident**

**Patna Medical College, Patna, India**

**Nov 2003- July 2004**

- Management of patients in clinics, wards and emergencies in the department of Ophthalmology.

**General Practitioner**

**Patna, India (self-employed)**

**April 2003-Nov 2003**

- Management of patients in clinics.

**Internship**

**Patna Medical College Hospital, Patna, India**

**Mar 2002- Mar 2003**

- Management of patients in the departments of medicine, surgery, obstetrics gynecology, family planning, public health and preventive medicine.
- Educating health and hygiene to the public during health camps.