Sandeep Karthikeyan

ICT Consultant & Research Engineer

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Professional Summary

Curious and driven engineer with a passion for applying IT and computational science in healthcare. Experienced in ICT infrastructure, systems integration, and clinical research across academic and medical institutions.

Focus: Healthcare IT, clinical research infrastructure, secure research computing, radiotherapy systems integration, and translational healthcare technology.

Technical Skills

Programming: Powershell, Bash, Python, PHP, Javascript, Matlab, R, Java
Databases: MYSQL, MariaDB, PostgreSQL, REDCap
Frameworks & Platforms: OpenStack, ELK Stack, SLURM, Docker/Podman, Singularity, Jenkins

Professional Experience

ICT Consultant (Full-time) — Oslo University Hospital | 06/2023 – Sep 2025

Responsible for IT infrastructure maintenance, improvement and operational support for radiotherapy treatment at Cancer Clinic, OUS (Ullevål and Radium Hospital).

Development of tools and services for integrating with treatment delivery machines and applications provided by vendors for radiation therapy treatment delivery, planning and validation like Varian, Eleckta, RaySearch, SunCheck, and MyQA.

Worked on the National Registry for Proton and Radiation Therapy project managed by OUS and Haukeland University Sykehus involving REDCap, CONQUEST server, Elastic Stack, DIPS APIs, and other databases and applications.

Head Engineer (20%) — Center for Precision Psychiatry, UiO | 02/2024 – Jan 2026

Involvement in AgeCare project and large-scale genomic and imaging data transfers to TSD for NORMENT projects.

Head Engineer (100%) — NORMENT, University of Oslo | 09/2020 – 06/2023

Led the grant writing team and collaboration with industry partners for the RCN-funded AgeCare project which received 16 million NOK funding.

Responsible for technical and administrative tasks involving secure high-performance computing infrastructure, storage and clinical databases used by 200+ researchers.

Responsible for secure transfers and analysis workflows for clinical, biological, genetic and neuroimaging data.

Research Assistant — Central Institute of Mental Health, Heidelberg University | 09/2019 – 09/2020

Responsible for maintaining IT infrastructure and database systems for the Department of Psychosomatics Medicine.

Worked on Graph Theory Network Analysis of psychopathological symptoms in psychosomatic conditions.

Education

MPhil in Computer Science — IIITM-K | 2018 – 2019

Feature and Stability selection for improving classification in high dimensional neuroimaging data. CGPA: 9.45/10

Integrated MSc in Theoretical Computer Science — PSG College of Technology | 2011 – 2016

233 credits completed across 64 courses and internships. CGPA: 7.32/10

Selected Publications

- Genetic Overlap Between Global Cortical Brain Structure, C-Reactive Protein, and White Blood Cell Counts. Biological Psychiatry (2023).
- Shared Genetic Loci Between Schizophrenia and White Blood Cell Counts Suggest Genetically Determined Systemic Immune Abnormalities. Schizophrenia Bulletin (2023).
- The Interplay of Biopsychosocial Factors and Quality of Life in Inflammatory Bowel Diseases: A Network Analysis. Journal of Clinical Gastroenterology (2021).
- COGEDAP: A Comprehensive Genomic Data Analysis Platform (Preprint).

Multidisciplinary Expertise

- Yoga Instructor — Radium Hospital, Oslo (2025)
- Integral Kundalini Yoga Teacher Training — Northern Lights Yoga Studio, Oslo
- IOPT facilitator training — IOPT Norway
- Circling and SAS Leadership training — Oslo
- Spatial Dynamics and Bothmer Gymnastics — Rudolf Steiner Hoyskolen

Languages

English • Tamil • Norwegian