



Vacancy Notification

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| Position Vacant: Internship |
| Number of Position: Two |
| Company Profile:- Centre for Chronic Disease Control (CCDC) is a not-for-profit research organization of health professionals and social scientists engaged in knowledge generation and knowledge translation for the prevention and control of non-communicable (chronic) diseases in varied settings of the developing countries. CCDC has been recognized as a Scientific and Industrial Research Organization (SIRO) by Department of Scientific & Industrial Research (DSIR), Ministry of Science and Technology, Government of India. CCDC also holds recognition as a WHO Collaborating Centre for Surveillance, Capacity Building and Translational Research in Cardio-metabolic diseases. |
| Project Brief: - India records the highest burden of oral cancer in the world particularly driven by young men and women. The primary screening test offered in the National population-based oral cancer screening program is oral visual examination which is limited for precise assessment. We aim to address the challenges in 'screening and referral pathways' for early diagnosis and timely treatment and management of oral precancer and cancer; and thus, help narrow the existing screening-diagnostic-treatment-management gaps in the National population-based oral cancer screening program. Visual examination alone is limited for precise clinical diagnosis and risk assessment of suspicious oral lesions and for subsequent referral linkages. The National oral cancer screening program is currently being rolled-out in phases across several districts of India. There is an urgent need for a screening and/or diagnostic adjunct that is accurate, reliable, cost-effective, non-invasive as well as need no expert evaluation to improve referral care linkages. Machine Learning (ML)- Artificial Intelligence (AI) are being actively investigated for several cancer sites using clinical-epidemiological, genomics or image data. Through this project, <i>we aim to explore the feasibility of image analysis of digital photographic images of the oral cavity using deep learning algorithms; and develop and test a computer aided screening and referral tool for oral cancer.</i> |
| Objectives <ul style="list-style-type: none">• To develop and test (internal validation) a deep learning (DL) multi-class image classifier to classify oral precancer lesions from healthy mucosal variants, common benign lesions, early oral cancer and frank invasive cancer• To develop and test (internal validation) a DL multi-class image classifier with metadata to classify oral precancer lesions from healthy mucosal variants, common benign lesions, early and invasive oral cancer. |
| Internship outcomes <p>Opportunity to work with our technical team during the development phase of the algorithm. This may include discussions on currently available deep learning algorithms/pipelines for computer vision, critical evaluation of the architecture and fine tuning of the algorithm, review of the code and incorporating best practices for ensuring a quality product.</p> |
| Qualification & Skill Required: <ul style="list-style-type: none">• B-tech/M-tech students and graduates with computer science or information technology curriculum or other curriculum with computer science or information technology as a major or minor subject.• Students/graduates/postgraduates with basic interest and understanding of machine & deep learning algorithms. |



CENTRE FOR CHRONIC DISEASE CONTROL

- Students/graduates/postgraduates with working knowledge of open-source machine & deep learning programming and coding.

Duration

This will be a full-time/part-time stipend-supported internship initially for a period of 3 months, extendable to 6 months depending on the progress and requirement of the project.

Mode of Internship

Online/face-to-face/hybrid mode, depending on the COVID situation and the requirements of the project. Face-to-face interactive sessions will be based at New Delhi or Bangalore, India

Please send detailed CV along with a cover letter to jobs@ccdcindia.org with the title “**Internship program**” in the subject line. Last date for sending your application is **19th September 2021**. Only shortlisted candidates will be contacted for the interview.

