AI4TB

Applications of AI for early diagnosis of tuberculosis and prediction of drug resistant Mycobacterium tuberculosis strains.

Kick-Off Meeting: 03/10/2023

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OUTLINE

1. Introduction
2. Team
3. Progress
4. Project launch plan
5. Website and social media
6. Expected activities

INTRODUCTION

TUBERCULOSIS A MAJOR HEALTH ISSUE

- → Tuberculosis (TB) is one of the leading causes of death worldwide and the deadliest infectious disease, with 1.4 million deaths annually and over 10 million infections (WHO, 2021),
- → TB is a major public health issue around the world and in Africa,
- → Approximately 30000 new cases per year in Morocco, 38000 in Burkina Faso, 208000 in South Africa and 324 000 in the Democratic Republic of Congo.

AI4TB

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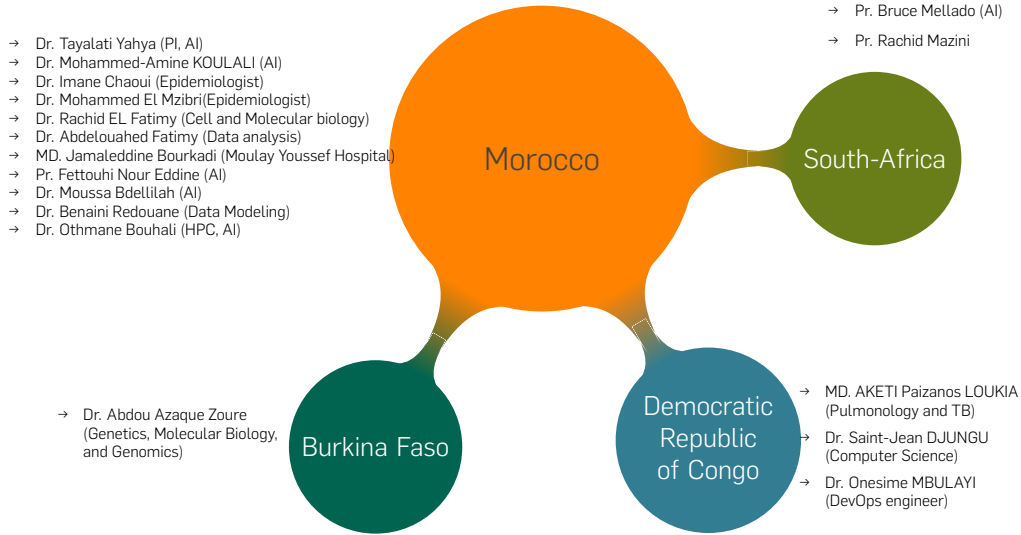
Applications of AI for early diagnosis of tuberculosis and prediction of drug resistant Mycobacterium tuberculosis strains.

Objectives:

- → Explore the potential of machine learning algorithms in identifying patterns and predicting TB outcomes using patient data.
- → Use machine learning algorithms to early diagnosis of TB to differentiate latent TB from a TB disease.
- → Develop new AI-based approaches for TB detection and treatment guidance in resource-limited settings.
- → Assess the effectiveness of these new approaches in real-world contexts.
- → Establish a real-time monitoring system for TB spread in multiple countries using AI tool.

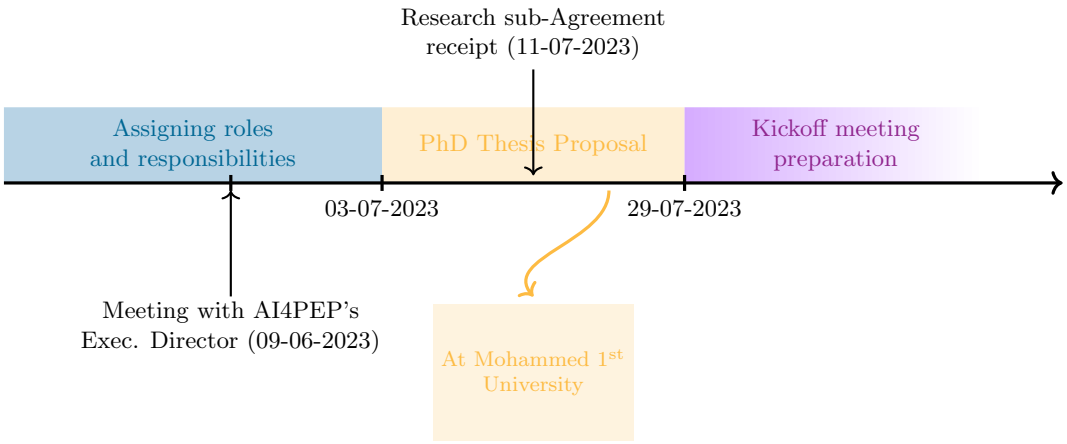
TEAM

TEAM


→ Dr. Tayalati Yahya (PI, AI)
→ Dr. Mohammed-Amine KOULALI (AI)
→ Dr. Imane Chaoui (Epidemiologist)
→ Dr. Mohammed El Mzibri(Epidemiologist)
→ Dr. Rachid EL Fatimy (Cell and Molecular biology)
→ Dr. Abdelouahed Fatimy (Data analysis)
→ MD. Jamaleddine Bourkadi (Moulay Youssef Hospital)
→ Pr. Fettouhi Nour Eddine (AI)
→ Dr. Moussa Bdellilah (AI)
→ Dr. Benaini Redouane (Data Modeling)
→ Dr. Othmane Bouhali (HPC, AI)
Morocco
→ Pr. Bruce Mellado (AI)
→ Pr. Rachid Mazini
South-Africa
→ Dr. Abdou Azaque Zoure (Genetics, Molecular Biology, and Genomics)
Burkina Faso
Democratic Republic of Congo
→ MD. AKETI Paizanos LOUKIA (Pulmonology and TB)
→ Dr. Saint-Jean DJUNGU (Computer Science)
→ Dr. Onesime MBULAYI (DevOps engineer)

PROGRESS

PROGRESS


Research sub-Agreement receipt (11-07-2023)
Assigning roles and responsibilities
PhD Thesis Proposal
Kickoff meeting preparation
03-07-2023
29-07-2023
Meeting with AI4PEP's Exec. Director (09-06-2023)
At Mohammed 1st University

PROJECT LAUNCH PLAN

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Stakeholders Participation	Communica-tion Campaign	Init. Project Management
Health Minster	Media	Project management tools
WHO representative	Press release	Tasks and Workflow
Canadian embassy	Partner universities	
Partner Universities	Social media	

WEBSITE AND SOCIAL MEDIA

PROJECT ACCOUNTS

https://twitter.com/AI4TB

https://sites.google.com/ump.ac.ma/ai4tb/teams

EXPECTED ACTIVITIES

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- → Surevy on AI TB: - AI for TB detection
  - AI for TB propagation modeling
  - Meta Survey : AI TB
  - Present status of TB management (AI4TB Member Countries)
- → dataset
- → Identify and establish partnerships with healthcare facilities in each participating country.

Q&A