

MACHINE LEARNING APPROACH TO DETECT & ANNOTATE EYE DISEASES USING RETINAL IMAGES

TMP-23-162

Project Logbook

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October 2023

Supervisor Meetings

Date: 15th December 2022

Discussion: Talk about choosing a topic and separating its components.

The screenshot shows a Zoom meeting interface. The main window displays a whiteboard with a handwritten diagram. The diagram is a flowchart starting with 'eye disease' at the top left. An arrow points from 'eye disease' to 'Human Computer'. Another arrow points from 'eye disease' to 'Fundus image'. From 'Fundus image', an arrow points to 'Glaucoma'. From 'Glaucoma', an arrow points to 'Dry eye solution'. From 'Dry eye solution', an arrow points to 'Blink detect'. From 'Blink detect', an arrow points to 'Computer vision'. From 'Computer vision', an arrow points to 'Cataract Conjunctivitis'. Below the whiteboard, the Windows taskbar is visible, showing the time as 9:29 PM on 12/15/2022. The Zoom interface includes a top bar with 'Request control', 'Pop out', 'People', 'Chat', 'Reactions', 'More', 'Camera', 'Mic', 'Share', and a 'Leave' button. The right sidebar shows a list of participants: PI, Perera H.A.N., Lakshith G.P.R., Devanshi Ganegoda, MI, and Muthukum.

Date: 10th January 2023

Discussion: Concluding the components of each member.

The screenshot shows a Zoom meeting interface. The main window displays three participants in a grid view. The participants are Lakshith G.P.R. (it20165666), Devanshi Ganegoda, and Kariyawasam K.G.P.C. (it20172978). The Zoom interface includes a top bar with 'People', 'Chat', 'Reactions', 'Rooms', 'More', 'Camera', 'Mic', 'Share', and a 'Leave' button. The bottom of the screen shows the Windows taskbar with the time as 6:10 PM.

Date: 6th February 2023

Discussion: Discussion with the supervisor and co-supervisor about challenges in the research study.

The screenshot shows a WhatsApp chat window. On the left is a green circular profile picture with the letters 'PI' and a small 'x' icon. The chat history shows a message from 'Perera H. A. N. S. it20166106' dated '02-06 12:49' with the text 'Scheduled a meeting'. Below this is a blue event card for a 'Discussion Regarding Research Topic' scheduled for 'Monday, 6 February 2023 @ 16:00'. The card includes a calendar icon and a three-dot menu icon. Below the card is a video call preview titled 'Discussion Regarding Research Topic end...' with a video camera icon, and participant avatars for 'PI' (green), 'KI' (pink), and three other people. At the bottom is a 'Reply' button with a curved arrow icon.

Date: 20th January 2023

Discussion: Conversation with the supervisor and co-supervisor about research methodology.

The screenshot shows a WhatsApp chat window. On the left is a green circular profile picture with the letters 'PI' and a small 'x' icon. The chat history shows a message from 'Perera H. A. N. S. it20166106' dated '01-20 17:41' with the text 'Scheduled a meeting'. Below this is a blue event card for a 'Discussion regarding research' scheduled for 'Friday, 20 January 2023 @ 18:00'. The card includes a calendar icon and a three-dot menu icon. Below the card is a video call preview titled 'Discussion regarding research ended: 38m 43s' with a video camera icon, and participant avatars for 'PI' (green), and three other people. At the bottom is a 'Reply' button with a curved arrow icon.

Research Group Meetings and Calls

The screenshot shows a Google Meet interface. At the top, a status bar indicates "it20165666 Lakshith G.P.R. is presenting". The main window displays a web browser with a Google search for "Information Hub" and a list of research papers. The first paper is "Determination for Glaucoma disease based on red area percentage" by it20165666 Lakshith G.P.R., dated 14 Dec 2021. The second paper is "Eye blink based warning system for eye health while using computers" by it20165666 Lakshith G.P.R., dated 14 Dec 2021. The third paper is "Abnormality Detection in Eye Fundus Retina" by it20165666 Lakshith G.P.R., dated 14 Dec 2021. A video thumbnail of the presenter is visible in the bottom right corner. The bottom status bar shows the time as 10:45 PM and the user as jus-gxvf-kyg.

it20165666 Lakshith G.P.R. is presenting

Search in chat and spaces

Information Hub

Research paper about Determination for Glaucoma disease based on red area percentage

https://vgn.silk.lk/proxy/44b0d3a/https://www.researchgate.net/publication/35494099

Determination for Glaucoma disease based on Red Area Percentage

Eye blink based warning system for eye health while using computers

https://vgn.silk.lk/proxy/44b0d3a/https://www.researchgate.net/publication/35494099

Abnormality Detection in Eye Fundus Retina

https://vgn.silk.lk/proxy/44b0d3a/https://www.researchgate.net/publication/35494099

History is on

10:45 PM | jus-gxvf-kyg

The screenshot shows a Google Meet interface. At the top, a status bar indicates "it20165666 Lakshith G.P.R. is presenting". The main window displays a web browser with a Google search for "Machine Learning" and a list of research papers. The first paper is "Eye Location using Hierarchical Classifier" by Gao-Feng Xu, Lei Huang, Chang-Ping Liu, Shi-Qi Ding, dated 2007. The second paper is "Prediction of De-embedded Eye Height/Width Parameters using Machine Learning in High-Speed Serial Link Characterization" by Mohit Goyal, Manish Pandey, Sharad Kumar, Rohit Sharma, dated 2021. The third paper is "A Review on Opportunities and Challenges of Machine Learning and Deep Learning for Eye Movements Classification" by Muhammad Anul Fikri, Paulus Insap Santosa, Sumi Wibrama, dated 2021. The fourth paper is "High Intraocular Pressure Detection from Frontal Eye Images: A Machine Learning Based Approach" by Mohammad Aloudat, Moad Faezpour, Ahmed El-Sayed, dated 2018. A video thumbnail of the presenter is visible in the bottom right corner. The bottom status bar shows the time as 8:44 PM and the user as nxz-bqtw-fnw.

it20165666 Lakshith G.P.R. is presenting

Machine Learning

Eye Location using Hierarchical Classifier

Gao-Feng Xu; Lei Huang; Chang-Ping Liu; Shi-Qi Ding

2007 International Conference on Machine Learning and Cybernetics

Year: 2007 | Volume: 4 | Conference Paper | Publisher: IEEE

Cited by: Papers (2)

Prediction of De-embedded Eye Height/Width Parameters using Machine Learning in High-Speed Serial Link Characterization

Mohit Goyal; Manish Pandey; Sharad Kumar; Rohit Sharma

2021 IEEE 30th Conference on Electrical Performance of Electronic Packaging and Systems (EPEPS)

Year: 2021 | Conference Paper | Publisher: IEEE

A Review on Opportunities and Challenges of Machine Learning and Deep Learning for Eye Movements Classification

Muhammad Anul Fikri; Paulus Insap Santosa; Sumi Wibrama

2021 IEEE International Biomedical Instrumentation and Technology Conference (IBITeC)

Year: 2021 | Conference Paper | Publisher: IEEE

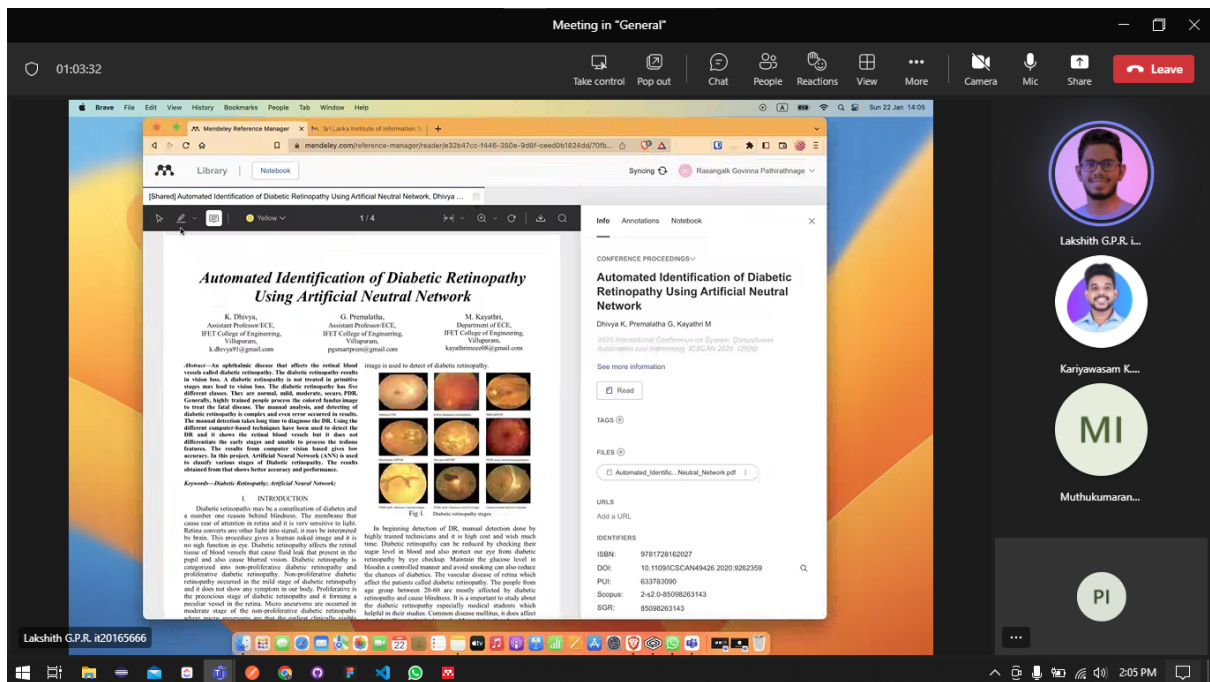
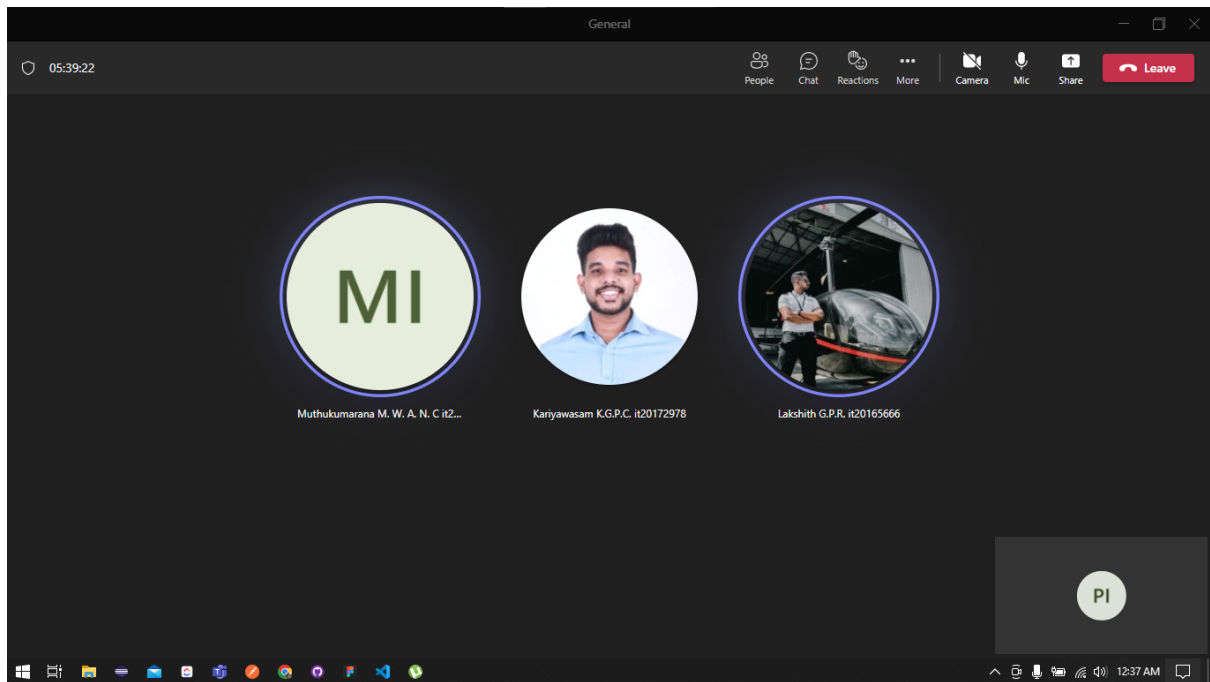
Cited by: Papers (1)

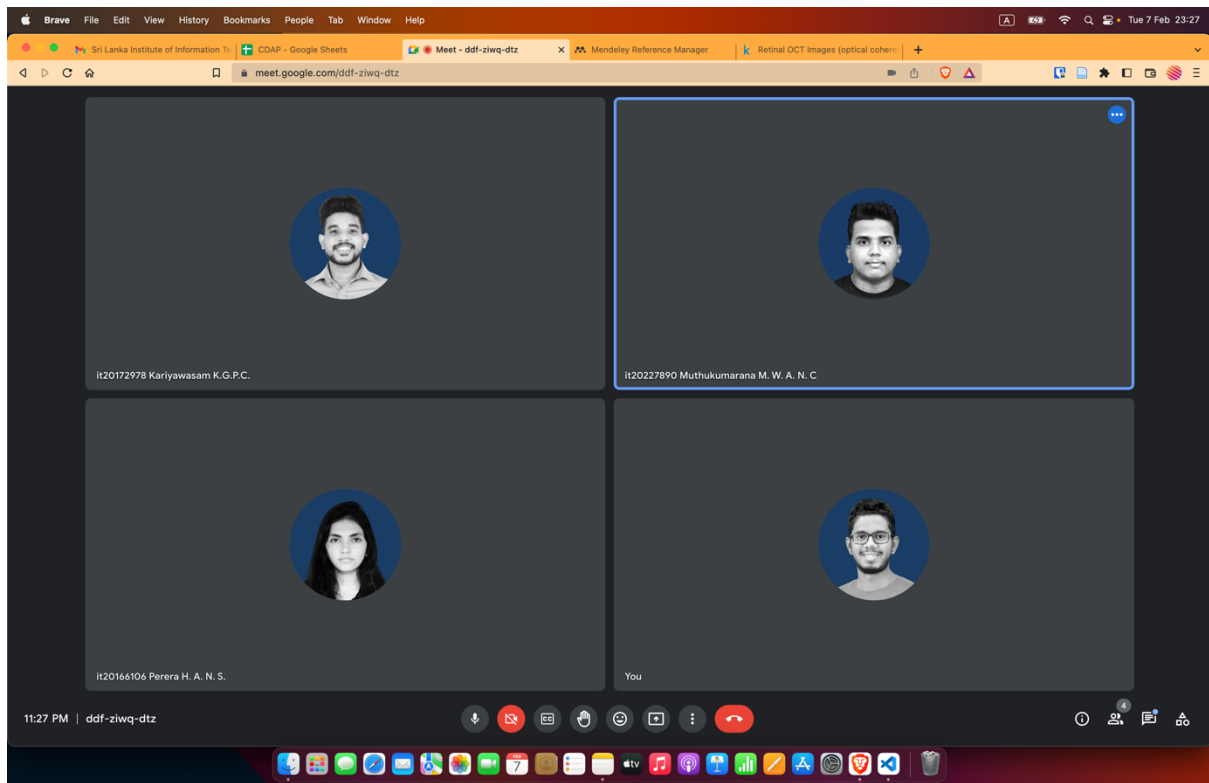
High Intraocular Pressure Detection from Frontal Eye Images: A Machine Learning Based Approach

Mohammad Aloudat; Moad Faezpour; Ahmed El-Sayed

2018 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)

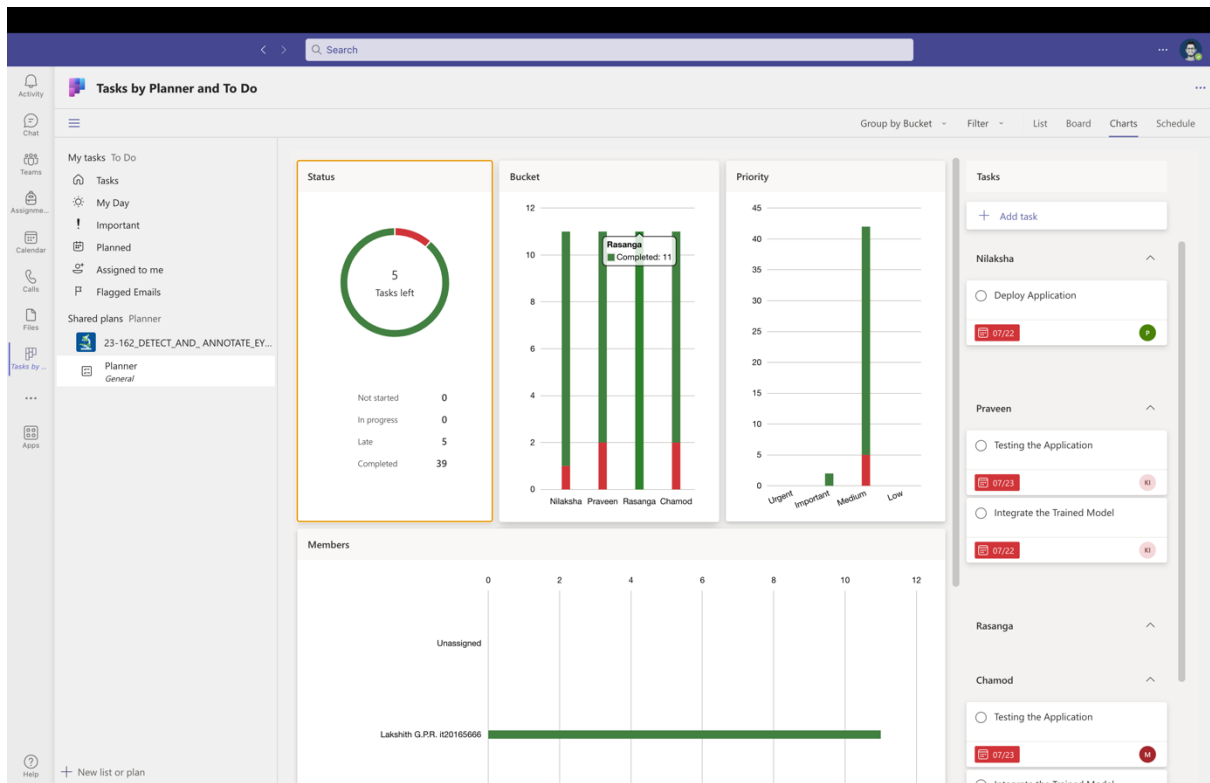
8:44 PM | nxz-bqtw-fnw





Individual Contribution Logs (MS Teams)

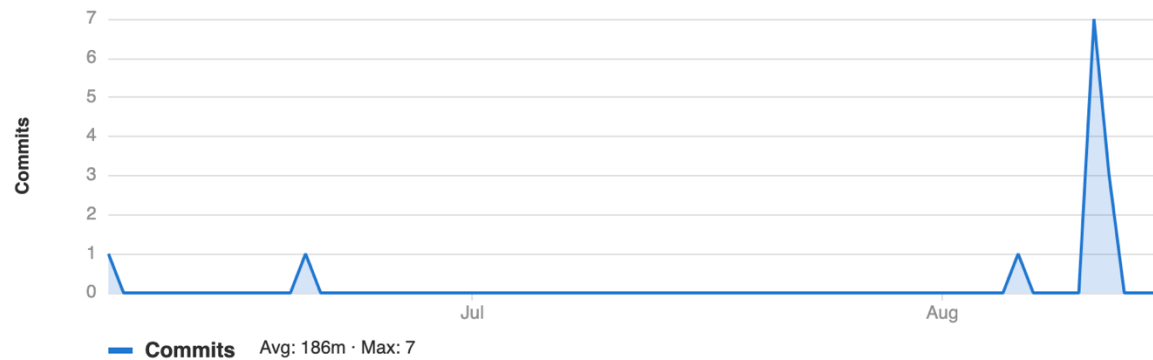
Tasks by Planner and To Do			
Assigned to me			
Task title	Source	Priority	Completed ↑
Implement Functionalities of Application using React Native	General / Planner	10/30	...
Design Mobile Application Interfaces	General / Planner	10/30	...
Implement UI using React Native	General / Planner	10/30	...
Integrate the Trained Model	General / Planner	10/30	...
Testing the Application	General / Planner	10/30	...
Train the Model	General / Planner	7/5	...
Design and Implement the Model	General / Planner	7/5	...
Preprocess and Clean the Dataset	General / Planner	7/5	...
Start Development Process	General / Planner	7/5	...
Research on Technologies to Use	General / Planner	7/5	...
Research and Collect Labeled Retinal Fundus Image Dataset for DR	General / Planner	7/5	...



Individual Contribution – Code Level (GitLab)

IT20166106

13 commits (it20166106@my.sliit.lk)



C

CDAP-Project-Frontend

Project overview

Repository

Files

Commits

Branches

Tags

Contributors

Graph

Compare

Issues0

Merge Requests1

CI / CD

Operations

Analytics

Wiki

Snippets

Members

Collanse sidebar

rasanga-v2

You can move around the graph by using the arrow keys.

