Rishab Khincha

https://rishabkhincha.github.io | http://mit.edu/~rkhincha

EDUCATION

BITS PILANI GOA
BE in Computer Science & MSc. in Physics
Aug '16-Jul '21 | Goa, IN
Cum. GPA: 9.24 / 10.00

AECS MAGNOLIA
Jun '14-May '16 | Bangalore, IN
CBSE : 94.70%

SJBHS
Jun '08-May '14 | Bangalore, IN
ICSE : 94.40%

COURSEWORK

COMPUTER SCIENCE
Artificial Intelligence
Machine Learning
Data Mining
Data Structures & Algorithms
Object Oriented Programming

PHYSICS
Computational Physics
Astronomy & Astrophysics
Quantum Mechanics I & II
Non-linear Dynamics
Statistical Mechanics

SKILLS

PROGRAMMING
C\C++ • Python • Java
SQL • HTML\CSS
Octave\Matlab • LaTeX

TOOLS & UTILITIES
Git • Ubuntu • tensorflow
keras • sklearn • networkx
astropy • Visual Studio • Eclipse

LANGUAGES
English • Kannada
Hindi • Marwadi

AWARDS

2020 RIKEN IPA
2020 GS Intern Coding Challenge
2019 MITACS GRI

EXPERIENCE

MIT MEDIA LAB | Research Affiliate
June 2020 – Present | Cambridge, USA
- Writing senior thesis under the supervision of Prof. Pattie Maes at the Fluid Interfaces group.
- Building fair and aware AI algorithms to aid healthcare and human cognition to build reliable decision making systems.

GOLDMAN SACHS | Summer Analyst
May 2020 – June 2020 | Bangalore, IN
- Worked in the Loans Servicing team to build a loan reconciliation app using Java, BPMN and eTasks.
- Received return offer to join full time based on the project performance.

APPCAIR & TCS RESEARCH | Student Researcher
Jan 2020 – Current | Goa, IN
- Building robust and interpetable models for medical imaging under the supervision of Prof. Ashwin Srinivasan and Dr. Lovekesh Vig.
- Working on multiple projects involving identifying COVID-19 from Chest X-rays and lesion classification.

WESTERN UNIVERSITY | MITACS GRI
May 2019 – July 2019 | London, CA
- Built ImageCube at the Nearby Galaxies group under the supervision of Prof. Pauline Barmby.

PUBLICATIONS & TALKS

CovidDiagnosis: Deep Diagnosis of Covid-19 Patients using Chest X-rays
K. Mahajan, M. Sharma, L. Vig, **R. Khincha**, S. Krishnan, A. Niranjan, T. Dash, A. Srinivasan, G. Shroff
Accepted for oral presentation at TIA Workshop, MICCAI 2020; Springer LNCS (to appear)

A Case Study of Transfer of Lesion-Knowledge
S. Krishnan, **R. Khincha**, L. Vig, T. Dash, A. Srinivasan
Accepted as a full paper at MIL3D Workshop, MICCAI 2020; Springer LNCS (to appear)

How to do science with ImageCube
R. Khincha, P. Barmby
*Invited hour long talk at PyAstro 2020, Trinity College Dublin. *Cancelled due to COVID-19*

ECG Signal Analysis on an Embedded Device for Sleep Apnea Detection
R. Khincha, S. Krishnan, R. Parveen, N. Goveas
Accepted as a full paper ICISP 2020; Springer LNCS

PROJECTS

CovidDiagnosis: Deep Diagnosis of Covid-19 Patients using Chest X-rays | Paper
- Built a deep learning pipeline for lung isolation, symptom embedding from CheXpert followed by hierarchical classification into different disease classes.

Knowledge Transfer in Lesions | Paper
- Studied the transfer of lesion knowledge across organs for lesion classification tasks and showed much better performance.

Sleep Apnea Detection on an Embedded Device | Paper
- Developed a machine learning pipeline to detect the presence of sleep apnea on embedded devices using ECG signals.