

Rishab Khincha

<https://rishabkhincha.github.io> | <http://www.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 interpretable 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. Niranjana, 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.