

JOEL SLEEBA

✉ joelsleebea1@gmail.com [🐦 JoelSleebea](#) [🌐 joelsleebea](#) [🌐 joelsleebea.github.io](#)

Education

Indian Institute of Science Eductaion and Research

Master of Science in Mathematics, GPA: 8.38

Oct. 2021 – May 2023

Thiruvananthapuram, Kerala

Madras Christian College

Bachelor of Science in Mathematics, GPA: 8.03

June 2018 – May 2021

Chennai, Tamil Nadu

Relevant Coursework

- | | | | |
|-----------------------|-------------------------|-----------------|-------------------------|
| • Functional Analysis | • Representation Theory | • Topology | • Analysis of Manifolds |
| • Measure Theory | • Finite Frames | • Real Analysis | • Machine Learning |

Experience

Unitary Invariants for Representations of Operator Algebras

Sept. 2023 – Present

Reading Project

Dr. Soumyashant Nayak, ISI Bangalore

- Developed a service to automatically perform a set of unit tests daily on a product in development in order to decrease time needed for team members to identify and fix bugs/issues.
- Incorporated scripts using Python and PowerShell to aggregate XML test results into an organized format and to load the latest build code onto the hardware, so that daily testing can be performed.
- Utilized Jenkins to provide a continuous integration service in order to automate the entire process of loading the latest build code and test files, running the tests, and generating a report of the results once per day.
- Explored ways to visualize and send a daily report of test results to team members using HTML, Javascript, and CSS.

Introduction to C* Algebras

June 2023 – Sept. 2023

Summer Reading Project

Dr. P Shankar, Cochin University of Science and Technology

- Assisted in development of the front end of a mobile application for iOS/Android using Dart and the Flutter framework.
- Worked with Google Firebase to manage user inputted data across multiple platforms including web and mobile apps.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.
- Utilized Android Studio as a development environment in order to visualize the application in both iOS and Android.

Fourier Analysis: From Circle, through the line, to the complex

Jan. 2023 – April 2023

Masters Thesis

Dr. P Devaraj, IISER Thiruvananthapuram

- Assisted in development of the front end of a mobile application for iOS/Android using Dart and the Flutter framework.
- Worked with Google Firebase to manage user inputted data across multiple platforms including web and mobile apps.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.
- Utilized Android Studio as a development environment in order to visualize the application in both iOS and Android.

Computability

Jan. 2022 – March 2022

Student Reading Project

Ashish Kujur, IISER Thiruvananthapuram

- Assisted in development of the front end of a mobile application for iOS/Android using Dart and the Flutter framework.
- Worked with Google Firebase to manage user inputted data across multiple platforms including web and mobile apps.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.
- Utilized Android Studio as a development environment in order to visualize the application in both iOS and Android.

Summer Schools and Symposiums

Mathematics Training and Talent Search | Level 1 Camp

April 2021 – May 2021

- Developed an automatic bot using Python and Google Cloud Console to register myself for a timeslot at my school gym.
- Implemented Selenium to create an instance of Chrome in order to interact with the correct elements of the web page.
- Created a Linux virtual machine to run on Google Cloud so that the program is able to run everyday from the cloud.
- Used Cron to schedule the program to execute automatically at 11 AM every morning so a reservation is made for me.

Mathematics Training and Talent Search | Level 0 Camp

May 2020 – June 2020

- Created an Android application using Java and Android Studio to calculate ticket prices for trips to museums in NYC.
- Processed user inputted information in the back-end of the app to return a subtotal price based on the tickets selected.
- Utilized the layout editor to create a UI for the application in order to allow different scenes to interact with each other.

Leadership / Extracurricular

Operator Algebra Reading Group

Sept. 2023 – Present

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
- Managed executive board of 5 members and ran weekly meetings to oversee progress in essential parts of the chapter.
- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.

Pi Quiz 3.0

March 14, 2022

Host

Club of Mathematics, IISER Thiruvananthapuram

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
- Managed executive board of 5 members and ran weekly meetings to oversee progress in essential parts of the chapter.
- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.

Online Foundation Course in Mathematics

Sept. 2021 – Oct. 2021

Mentor

MTTS Trust

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Achievements

M.Sc Entrance Examination

2021

Rank 1, Mathematics

Pondicherry University

M.Sc Entrance Examination

2021

Rank 3, Mathematics

Hyderabad Central University

Additional Courses

CS101.2x: Object-Oriented Programming

July 2020 – Dec. 2020

Grade: A+ (Maximum Possible Grade)

MOOCs Course, IITBombayX

CS101.1x: Programming Basics

July 2020 – Dec. 2020

Grade: A+ (Maximum Possible Grade)

MOOCs Course, IITBombayX

Other Projects

Math Modelling

Sept. 2022 – Nov. 2022

Volunteer

The International Genetically Engineered Machine competition (iGEM), IISER Thiruvananthapuram

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- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.

Web Development

Sept. 2022 – Nov. 2022

Volunteer

The International Genetically Engineered Machine competition (iGEM), IISER Thiruvananthapuram

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XOR Encryptor

Jan. 2021

Developer

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
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- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.

CSSart

May. 2020

Developer

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
- Managed executive board of 5 members and ran weekly meetings to oversee progress in essential parts of the chapter.

Search for Extra Terrestrial Intelligence

Sept. 2015 –

Volunteer

SETI Institute

- Achieved a 4 star fraternity ranking by the Office of Fraternity and Sorority Affairs (highest possible ranking).
- Managed executive board of 5 members and ran weekly meetings to oversee progress in essential parts of the chapter.
- Led chapter of 30+ members to work towards goals that improve and promote community service, academics, and unity.

Technical Skills

Programming: Python, C, C++, Java, Bash, SQL

Markup: L^AT_EX, Markdown, HTML, CSS

CAS: MATLAB, GNU Octave, Maxima, SageMath