



Ayushman Kumar Banerjee


JUNIOR COMPUTATIONAL BIOLOGIST

ayushmaan.banerjee@gmail.com 

(+91) 9771 495 385 

West Bengal, IND 

<https://www.linkedin.com/in/65kb/> 

<https://namhsuya.github.io/ayushman/> 

SUMMARY

With my inherent interest in IT and academics in life science, I hope to create right mix of biology with informatics to secure a responsible career opportunity to fully utilize my training and skills, while making a significant contribution to the success of the society and organisation for which I would be chosen to work for.

EXPERIENCE

Junior Computational Biologist

Bencos Research Solutions Pvt. Ltd. *Feb 2021 - Present*

- Building bioinformatics pipeline and development of relevant tools.
- Manage and mediate between bioinformatics and web development team.
- Handle and assist in client based bioinformatics analysis project.

Research Intern (Remote)

Institute of Bioinformatics, Bangalore *Sep 2020 - Jan 2021*

- Development and testing of machine learning algorithm for gene biomarker discovery.

Research Intern

CSIR-IICB True Campus *Dec 2019 - Jan 2020*

- Supported research and development efforts to create procedures to detect CT scan images of brain for detection of strokes.
- Planned, modified and executed computer vision techniques, procedures and tests.

Research Trainee

E&ICT Academy, IIT Kanpur *Jun 2019 - Jul 2019*

- Cancer diagnostics using AI The project utilizes a CNN architecture to classify (Invasive Ductal Carcinoma)
- A dataset of 2.7+ lac images was used to train the neural network and a testing accuracy of 87% was achieved at the end

PROJECTS

Underpinning miRNA-miRNA co-functional interaction patterns in the metabolism of *Oryza sativa* by genome-scale network analysis

Research *Feb 2020 - Nov 2020*

Protocol to identify functional miRNA clusters responsible for regulation of rice metabolic pathways.

Publication: <https://doi.org/10.1016/j.heliyon.2020.e05496>

Human miRNA-gene-drug-diseases interaction and their statistical relationship

Software Developer | Research *2017 - Mar 2020*

Bioinformatics tool development to analyze and visualize networks of miRNA mediated gene-drug regulation of human diseases by using publicly available databases; HMDDv3 and PharmacomIR.

Publication: <https://doi.org/10.1016/j.mgene.2020.100699>

A study to determine differentially expressed isoforms of prognostic DEGs in ovarian cancer.

Member | Group project *Jul 2019 - Oct 2019*

To study the differential expression in isoforms of DEGs that undergo aberrant splicing and thus have prognostic significance for detection of ovarian cancer.

- Collected the prognostic genes for ovarian cancer from Protein atlas,
- Collected Gene RSEM and isoform RSEM raw count data from Firebrowse.
- The data analysis was done on the analysis platform of Pine Biotech and R-Studio.

<https://drive.google.com/file/d/1mG68mCKbvUWso5H03pOW0skAoF9T1nLJ/view?usp=sharing>

Breast Cancer Detection using OpenCV and Deep Learning

Jun 2019 - Aug 2019

Cancer detection from histopathological images using a VGGNet-like CNN architecture using samples of Invasive Ductal Carcinoma made available via the BACH competition & kaggle.

Link: https://colab.research.google.com/drive/1OKY-x0epCSE_Gjidx3sJszt3b7po5rqH

Plant Seedling Classification

Jun 2019 - Jul 2019

Plant seedling classification to identify vegetation type using ImageNet architecture. *Dataset used:* Aarhus University Signal Processing group, in collaboration with University of Southern Denmark.

<https://colab.research.google.com/drive/1JEJYtja2WmAdxw3e29OsTTkmni98Vtft>

stor.io

Developer | Co-Author *Jun 2018 - Sep 2018*

stor.io is a lightweight story-templating Android app.

For more info please visit the given playstore link: https://play.google.com/store/apps/details?id=com.stor.io&hl=en_IN

Java based Room Booking System for Hotels/Lodges/Motels

Developer *Oct 2014 - Dec 2014*

Java + MySQL solution for a generic room booking system, with following features:

1. Employee management
2. Room management
3. Room booking, check in + check out
4. Billing system

<https://github.com/namhsuya/Hotel-DBMS>

EDUCATION

B. Tech

AIBNK, Amity University Kolkata *2016 - 2020*

Biotechnology; 7.17

CBSE, 12th

Delhi Public School, Patna *2013 - 2015*

PCB + IP; 91.25%

ICSE, 10th

Central Modern School, Baranagar *2004 - 2013*

Science; 86.8%

CERTIFICATION

Certificate of Machine Learning for Biomedical Data

PineBiotech *2019-10-15*

A project based certificate course spanning over 4 months with segments from transcriptomics,

metagenomics and utilities of machine learning in biomedical data.

Certificate in Artificial Intelligence

E&ICT Academy, IIT Kanpur 2019-07-22

**EXTRA-
CURRICULAR**

ALGOMIND-Business Idea Pitch

Amity and DST-GoI 2019-09-13

Runner-up Certificate in ALGOMIND: Business Idea pitching competition.

AI Hackathon

E & ICT Academy, IIT Kanpur

Core member of winning team among 15 others teams.