

# Rohan Raha

**Business Analyst,  
American Express**

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## Work Experience

### Risk Analyst-Credit and Fraud Risk| American Express

Dec 2018 – Now | Gurgaon, India

- Development of modelling framework to meet the new credit reserve standards set by Financial Accounting and Standards Boards(FASB) and the International Accounting Standards Boards(IASB).
- To calculate the Probability of default for a consumer on an Amex card in the next 12 months based on his financial history.
- Development and enhancement of loss forecasting models for credit and charge portfolios for Consumers across all International markets.
- Perform statistical and quantitative analysis to evaluate multiple alternatives to generate insights and derive recommendations.
- Ongoing performance tracking of loss forecasting models and variance analysis of credit reserve levels.

### Platform Engineer- Quantphi Analytics

May 2018 – Dec 2018 | Mumbai, India

- AWS Platform Engineer - AWS,GCP automation, scripting, orchestration; automating infrastructure across business using tools to maintain and improve the AWS environment and shorten release cycles; developing and maintaining the platform to host huge amounts of data and computation and building the architecture from scratch.

## Projects

### MSc.Thesis: 2D Seismic Reflection Tomography in

Anisotropic Media | July 2017 – April 2018

- Seismic travel time data are compared to an initial Earth model and the model is modified until the best possible fit between the model predictions and observed data is found.
- Solved Traveltime Tomography as an inverse problem to image the subsurface anomalies by calculating the elastic parameters.

### On the Accidental Degeneracies for a Particle in a

Box | May 2016 – April 2018

- Demonstrated that with increase in Energy, 4-fold degenerate states become more common and finally becomes more common than 2-fold degenerate states.
- Predicted at what energy value the number of 8-fold degenerate state will exceed the number of 2-fold degenerate state
- Developed a formula by which we can calculate the degeneracy of an Energy state using Fermat's theorem on Sum of two squares.

## Publications

### R.Raha, Euclidean Quantum Gravity for a Kerr-

Newman Black Hole | Dec 2019

<https://arxiv.org/pdf/1912.05674.pdf>

- Calculated the zeroth order action for a Kerr-Newman black hole having a generalized metric.
- Introduced a second order perturbation to the curvature term of the action.
- Demonstrated how to calculate the Entropy for a Kerr-Newman black hole.

## EDUCATION

### IIT KHARAGPUR

Major: INT. MSC IN EXPLORATION  
GEOPHYSICS  
2013-18

Cum. GPA: 8.42 / 10.0

Minor: INT. MSC IN PHYSICS  
2013-18

Cum. GPA: 8.36 / 10.0

### DAV MODEL SCHOOL

93 /100 | 2011-2013| Durgapur, India

### ST. XAVIER'S SCHOOL

93/100 | 2001-2011| Durgapur, India

## CERTIFICATIONS

- Machine Learning A-Z™: Hands-On Python & R In Data Science by UDEMY
- Machine Learning by Stanford University (Coursera)
- Game Theory by Stanford University (Coursera)
- Algorithmic Toolbox by University of California, SanDiego(Coursera)

## SKILLS

- C • C++ • Python (Python libraries like Pandas,Numpy and Seaborn) • Jupyter Notebook • SAS • MATLAB • MySQL
- Tensorflow • Keras • MS-Office