

# Reshmi Ghosh

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## Education

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### Carnegie Mellon University

Pittsburgh, PA

Doctor of Philosophy (Ph.D.) ; Focus: Probabilistic analysis of power system reliability metrics ; **GPA: 3.74/4.00**

*Sept 2021*

M.S. Engineering & Public Policy ; Focus: Data Science for Policy Analysis; **GPA: 3.70/4.00**

*May 2020*

M.S. Civil & Environmental Engineering ; Focus: Data Analytics for Infrastructure Systems; **GPA: 3.70/4.00**

*Dec 2017*

### University of Mumbai

Mumbai, India

B.S. Civil Engineering ; **GPA: 3.80/4.00**

*May 2016*

## Relevant Coursework

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Ph.D. Deep Learning, Applied Data Analysis (Statistics), Practical Data Science, Machine Learning, Data Analytics, Business Intelligence, Decision Analytics, Risk Analysis, Python for Developers, Data Warehousing, A/B Testing (Udacity)

## Projects

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- **Doctoral Research:** Developing an open source tool in python to derive actionable insights about allowing large renewable energy penetration in the existing grid (working with linux based HPC cluster). Also leveraging advanced machine methods (Deep Learning based LSTM models - vanilla and with Attention, XGBoost, CatBoost, etc.) to reconstruct electricity demand for different Balancing Authorities of the U.S.
- **Deep Learning research project:** Deployed MobileNetV3 & an LSTM based NLP model (test: 60% accuracy) to develop a Visual Question Answering based framework for helping the blind in daily chores.
- **Machine Learning(ML) research:** Conducted end-to-end data analysis (unsupervised ML clustering) for examining user behavior on Instagram, & concluded only 10% of all users posted relevant climate change related content.
- **Kaggle - Titanic survival prediction:** Developed an ML pipeline to conduct data-cleaning, pre-processing, feature engineering, & built 'stacking' ensemble model using Logistic Regression, Support Vector, & Random Forest classifier to predict survival rate in Titanic Disaster with 93% accuracy.
- **A/B Testing to augment enrollment strategy for MOOC :** Analyzed the effect of 'studytime-filter' on students enrolling in MOOC. Concluded based on statistically significant conversion rate numbers that filter shouldn't be launched.

## Positions of Responsibility

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- Deep Learning Teaching Assistant • V.P. Internal Affairs, CMU Graduate Consulting Club

## Professional Experience

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### Carnegie Mellon University

Pittsburgh, PA

#### Research Intern

*Jan 2018 - Aug 2018*

- Worked in collaboration with cross-functional research organizations from Portugal on designing evaluation metrics for economic analysis of deep-sea mining, & conducted cost-benefit to understand feasibility of extracting poly-metallic nodules.
- Conducted statistical analysis to examine the change of future wind speeds using large climate dataset & concluded that parts of the U.S. are subjected to 8-30% variability in the future under severe climate change effects.

### Baumann Consulting Inc.

Chicago, IL

#### Summer Intern (Energy Analytics & Business Development)

*May 2017 - Aug 2017*

- Strategized outreach programs & marketing initiatives to network with potential clients & increase company's presence in the energy consulting market.
- Cleaned & analyzed client mechanical system data to create neat visualizations and derive insights about anomalies in operation. Recommended economically feasible remedies for reducing their energy consumption by 30%.

## Programming Skills

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**Languages:** Python(PyTorch, NumPy, Pandas, scikit-learn, NLTK, Matplotlib, PySpark), SQL, R, Matlab\*, C\*

**Technologies:** AWS, Git, Tableau, Microsoft Office, MySQL, MongoDB, Hadoop

\*Familiar

## Achievements

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- Finalist, Yale University Consulting Case Competition, 2019 • CMU Dean's Fellowship recipient, 2018