

# Ravinithesh ANNAPUREDDY

MASTER STUDENT IN DIGITAL HUMANITIES · EPFL

✉ ravinithesh.annapureddy@epfl.ch | 🏠 ravinitheshreddy.github.io | 📧 ravinitheshreddy | 🌐 ravinithesh | 🎓 Ravinithesh

## Education

### École Polytechnique Fédérale de Lausanne (EPFL)

Lausanne, Switzerland

MASTER OF SCIENCE (M. Sc), DIGITAL HUMANITIES

2020 - Present

- *Relevant Coursework:* Foundation of Digital Humanities, Computational Social Media, History and the Digital, Applied Data Analysis, Deep Learning, Digital Education and Learning Analytics, Cultural Data Sculpting, Distributed Information Systems, Digital Musicology, Data Visualisation.
- *CGPA:* 5.6/6

### Mahindra École Centrale

Hyderabad, India

BACHELOR OF TECHNOLOGY (B.TECH), COMPUTER SCIENCE AND ENGINEERING

2014 - 2018

- *Relevant Coursework:* Artificial Intelligence, Machine Learning, Data Mining, Database Management Systems, Web Programming, Design Thinking, Cinema & Philosophy, Modern Culture & Philosophy, Urban Studies.
- *Thesis:* Adaptive Learning in Extreme Learning Machines.
- *CGPA:* 9.88/10 (last year); 9.21/10(overall).

## Experience

### École polytechnique fédérale de Lausanne (EPFL)

Lausanne, Switzerland

MASTER THESIS STUDENT

Mar. 2022 - Present

- Working on a project to develop a deep learning system to mine the children's drawings database of the Louis François center for UNESCO to find patterns linked with famous artworks.

### Institut national d'histoire de l'art (INHA)

Paris, France

RESEARCH INTERN, RICH DATA

Sep. 2021 - Feb. 2022

- Part of the Service Numérique de la Recherche (Digital Research) team.
- Developed a *pipeline* for post-processing correction of OCRized historical documents using the data itself with minimal external data.
- Using the developed pipeline, cleaned and published dataset of People in 19<sup>th</sup> century Paris extracted from the city directories.

### Ground Inc.

Tokyo, Japan

DATA SCIENTIST, ALGORITHM AND PRODUCT DEVELOPMENT

Nov. 2018 - Sep 2020

- Part of the team that develops algorithms to model a warehouse for optimizing the cost involved in logistic operations.
- *GCODE*  
Developed a Python tool to create a data set of point clouds and performed object classification using them.
- *Automatic Buffer Inserter*  
Developed a Python program to suggest coordinates to a robot to place the buffer material in the delivery box to protect the items from damage.
- *Development of DyAS*  
Developed variants of Dynamic Inventory Allocation software - that suggest the best locations for stock expecting future orders and Dynamic Resource Allocation software - that combines and schedules orders in a warehouse to reduce lead fulfillment time.

## Publications

### Adaptive Critic Design for Extreme Learning Machines applied to noisy and drifting industrial processes.

8<sup>th</sup> IEEE Symposium Series on Computational Intelligence, 2018

RAVINITHESH REDDY A, A.K. BHATTACHARYA AND NIRANJAN REDDY M

<https://doi.org/10.1109/SSCI.2018.8628664>

### Advance Predictions of critical digressions in a noisy industrial process - performance of Extreme Learning Machines versus Artificial Neural Networks

3<sup>rd</sup> IFAC International Conference on ACODS, 2018

RAVINITHESH REDDY, A.K. BHATTACHARYA AND G. RISHITA

<https://doi.org/10.1016/j.ifacol.2018.05.017>

### Extreme Learning Machines with Frequency-based noise filtering for prediction of critical digressions in a noisy industrial process

14<sup>th</sup> IEEE India Council International Conference, 2017

ADITYA GUPTA, MANIKUMAR PLN, RAVINITHESH REDDY, ARYA K. BHATTACHARYA

<https://doi.org/10.1109/INDICON.2017.8487562>

### Magnetic Metamaterials: A comparative study of resonator geometry and metal conductivity

27<sup>th</sup> IUPAP Conference on Computational Physics, 2015

SHASHANK R, RAVINITHESH REDDY ANNAPUREDDY, K SREEKAR, KAUSIK B, MURTAZA B AND DIBAKAR R C

<https://doi.org/10.1088/1742-6596/759/1/012044>

## Academic Projects

---

### TikTok and the US election

- Studying the 2020 US Presidential election by analyzing the hashtags and challenges on TikTok through topic modeling shows that youth are also concerned about issues but use non-traditional means of communication and dialogue.

Computational Social Media

Mar 2021 – Jun 2021

### Hollywood and the Pentagon

- Analyzing the movies produced in Hollywood through the assistance received by the US Department of Defense (DoD) using the language processing techniques revealed that the help was biased towards movies providing good outlook of DoD.

History and the Digital

Mar 2021 – Jun 2021

### Tonality in non-western music

- Researched cross-culturality of tonality in music by statistically analyzing modal music of Chinese Folk Songs revealing deep cross-regional similarities. The findings highlight the directedness of music across all the examined regions.

Digital Musicology

Mar 2021 – Jun 2021

### Face of the War

- Created an interactive visualization of photographs of soldiers who took part in the Great War. While presenting the portraits of soldiers along with their records, the visualization manifests the question, who is the real face of the war?

Cultural Data Sculpting

Mar 2021 – Jun 2021

### Terzani Online Museum

- Developed an online platform to access the photo collection of Mr. Terzani through text and image based search.

Digital Humanities

Sep 2020 – Dec 2020

### Famous World

- Developed a spatial visualization platform to display famous people from Pantheon based on their birthplace.

Data Visualization

Mar 2021 – Jun 2021

## Training

---

### Technology Entrepreneurship Program

INDIAN SCHOOL OF BUSINESS

Research & Product development

May 2016 – May 2018

- Created a working prototype and business plan for a system that enables the dairy farmers to do business, without the need for middlemen.

### Predictions of digressions

MAHINDRA ÉCOLE CENTRALE - PROF. ARYA KUMAR BHATTACHARYA

Research Assistant

May 2017 – June 2017

- Developed a system that can predict adverse digressions in a noisy industrial process using Extreme Learning Machines.

### Load Prediction in Smart Grids of Ontario, Canada

MAHINDRA ÉCOLE CENTRALE & TECH MAHINDRA

Research Assistant

Aug 2015 – Feb 2016

- Developed solutions to predict i) load on a transformer and ii) the expected number of Electric Vehicles using Artificial Neural Nets.

## Skills

---

### Programming

- Python, C++, MATLAB, MySQL, Pybind, HTML/CSS, Latex.

### Softwares and Services

- Docker, Git, AWS GCP and Adobe Premiere Pro.

### Languages

- English (Fluent), French (Elementary), Japanese (Elementary), Hindi (Fluent), Telugu (Mother Tongue).

## Co-Curricular Activities

---

### Class Delegate, Digital Humanities Section.

École Polytechnique Fédérale de Lausanne

2020 - Present

- Represent the students of Digital Humanities department in various fronts and academic councils at EPFL.

### Head, Internship and Placement Council

Mahindra École Centrale

2017 - 2018

- Facilitated visits and interactions of students with industries for jobs and internships.

### Founder and Head, OutReach Club.

Mahindra École Centrale

2015 - 2018

- Designed and led students in community outreach programs like VIGNAN, MyParliament, and blood donation drives.

### Director, Cinematographer and Editor, Weaving Deciphered.

Media Project

- A process documentary on power loom weaving.

Apr 2015