



# Inspire...Educate...Transform.

# PGP in Data Science

# Orientation Session

# Manoj Akella

## Lead Data Scientist

# Class Structure

- 4 hours lecture...focus on explaining concepts.
- 4 hours lab...focus on hands-on.
- Hands-on activities using R and Python. Do not underestimate its importance.

Will have focus in exams.

- Welcome to come to office during weekdays and clarify questions. But please make an appointment as Data Scientists are also involved in Consulting/Product Development/Research activities.



# Course Material and Discussion - Piazza



Screenshot of the Piazza platform showing course material and discussion.

The interface includes:

- Header:** piazza, CSE 7202c Batch 10, 24 posts.
- Navigation:** Q & A, Resources, Statistics, Manage Class.
- Question History:** Shows a list of recent posts and discussions.
- Question Detail:** A post titled "Few basic questions...." by Sridhar Pappu, dated 5/5/15, with 24 views. It contains a list of questions about statistical methods and model building.
- Instructors' Answer:** A response from Sridhar Pappu, dated 4/30/15, discussing the importance of understanding assumptions and making informed decisions.
- Statistics:** Average Response Time: N/A, Special Mentions: Sridhar Pappu answered Step Wise Regression in 15 min. 4 months ago.

- Ask a lot of questions
- Post questions, assignments, etc. in the correct module; else, they will be lost.

# Video Recordings - Impartus

- Do not miss classes.
- Video ≠ Classroom
- Will be available for 3 months after the program.
- Contact if you need extension.

The screenshot shows the Impartus Lecture Capture interface. At the top, there's a navigation bar with the INSOFE logo, a search bar, and user information. Below the navigation, there's a sidebar with icons for home, user profile, course, video, search, and help. The main content area displays a list of recorded lectures from different classrooms and batches, each with a thumbnail, title, views, and rating. To the right of the list, there's a section for recently added lectures and a live video feed of a professor in a classroom setting. On the far right, there are sections for trending topics and recently added lectures.

Class Room 1  
Batch 17  
Session 2016-17 • 139 Lectures

Lecture 51: Decision Trees  
17th Jul 2016, 11:00 am

Class Room 2  
Batch 18  
Session 2016-17 • 174 Lectures

Lecture 174: No Topic Entered  
20th Nov 2016, 11:00 am

Class Room 1  
Batch 23  
Session 2016-17 • 96 Lectures

Lecture 78: No Topic Entered  
26th Mar 2017, 12:00 pm

Class Room 2  
Batch 24  
Session 2016-17 • 128 Lectures

Lecture 98: The Art And Science..  
15th Apr 2017, 12:00 pm

Classroom 3  
Batch 26  
Session 2016-17 • 96 Lectures

Lecture 38: Rules And Rule Ind...  
19th Mar 2017, 12:00 pm

Start A Discussion 18117 SRIDHAR PAPP...

Why Tata Nano Did Not Take Off Despite Being The Cheapest Car? Detailed Analysis Would Rea...

A Fire Fighter Has To Get To A Burning Building As Quickly As He Can. There Are Three Path...

My Topics

Look for more topics

Help 50413 Followers Unfollow

Trending Topics

Business 80 Followers Follow

Management 32 Followers Follow

Financial 18 Followers Follow

Recently Added Lectures

No Topic Entered test 17th May 2017, 02:50 pm

No Topic Entered BIZ Calls 16th May 2017, 01:30 pm

INSOFE International School of Engineering

# Feedback - Zoho

- One per module.
- Provide as soon as you receive the link.
- 5% grade as incentive.

Instructors: Dr. Sridhar Pappu

**PLEASE LIMIT YOUR FEEDBACK TO THIS MODULE, ITS FACULTY AND DATA SCIENTISTS WHO HANDLED LABS FOR THIS MODULE.**

1. Please tell us about yourself. We will ask your permission in the last question on using this information in our collateral. We will NOT use this information without your explicit permission.

Your Name:\*

Your Designation:\*

Your Company:\*

2. Content\*

	Poor	Average	Good	Excellent	Not Applicable
How smooth was the flow of the course material?	<input type="radio"/>				
Were the topics covered in sufficient detail?	<input type="radio"/>				
Did it provide real world experience?	<input type="radio"/>				
How useful is the instructional and reference material provided?	<input type="radio"/>				



# Assessments

- 20 + ROTes, 3-4 CUTes, Hackathons
- Weightage
  - Recall Output Test (**ROTe**): 15%
  - Conceptual Understanding Test (**CUTe**): 25%
  - Mid-term Hackathon (**MiTH**): 15%
  - Project Hackathon and Defense (**PHD**): 35%
  - Feedback: 5%
  - Attendance (85%+): 5%
- Non-zero cumulative score in each a must

Report Date: February 11, 2015

The below report summarizes your performance in the program of your study. Absence of a bar in the chart(s) indicates that you did not participate in the corresponding activity. If you find any discrepancy in the report, please contact the academic team at INSOFE.

Cumulative Scores\* Required for:

Certificate of Engineering Excellence – 50% with a non-zero score in each assessment activity  
INSOFE Career Services – 60%



\* Weightage of each assessment activity in the Cumulative Score is:

# Certification (or not)

- **PGP certificate** : *If cumulative grade > 50%*
- **Certificate of Participation** : *If attendance is above 70% and cumulative grade < 50%*
- **No certificate** : *If attendance is below 70% and cumulative grade < 50%*

\*\* You have to work really hard to be (in)eligible for this.

## International School of Engineering

upon recommendation of the faculty and  
by authority of the Board of Directors,  
hereby confers upon

JOHN DOE

### POSTGRADUATE CERTIFICATE IN DATA SCIENCE

on successful completion of all the requirements of the  
352-hour program conducted between  
September 10, 2018 and January 23, 2019.

*This program is certified for quality of content, assessment and pedagogy by the Language Technologies Institute (LTI) of Carnegie Mellon University (CMU).*

*The program curriculum has been developed in collaboration with LTI.*



Dated this second day of August, two thousand and seventeen.

Dr. Dakshinamurthy V Kolluru  
President



Dr. Sridhar Pappu  
Executive VP – Academics



# ROTe, CUTe, MiTH and PHD Postponement Policy



## Recall Output Test (ROTe)

- Only 2 ROTe postponements will be allowed throughout the program.
- If someone takes a ROTe from outside the classroom, they will be marked 0 for that ROTe.
- While 2 postponement policy stays, if there is an extended business trip, On sharing the details, INSOFE can make exceptions. INSOFE may request candidates for proofs like tickets, etc. as well.



## Conceptual Understanding Test (CUTe)

- No postponement of CUTe allowed during the program.
- If any student misses a CUTe and INSOFE determine at the end of the program that student met the performance criteria only for a Certificate of Participation and not the PGP Certificate, INSOFE will check if scoring up to 80% in the missed CUTe would have enabled student to get the PGP Certificate.
- If so, INSOFE will conduct a separate CUTe for student at that time.
- If scoring even 80% would not impact Student's certification in that case INSOFE will not conduct CUTe.



## Conceptual Understanding Test (**CUTe**)

- In case student miss more than one CUTe. INSOFE will determine which module will enable him / her to cross the line for PGP Certificate among the missed modules. Please note only ONE module can be selected.
- Student must submit valid documented proofs of why (s)he missed the CUTe in the first place. Without such a proof, the CUTe will not be conducted even if it allows student to cross the finish line.



## Mid-term Hackathon (MiTH)

- No postponement of MiTH allowed during the program.
- MiTH will be treated as CUTe for postponement purposes.
- MiTH can be conducted again only along with a future batch as it is a competition. It cannot be taken at your convenience.
- If you miss the immediate next MiTH opportunity as well, you will not be provided further option of taking it again.
- Student will also not be eligible for the scholarship for Phase 2 that is based on the MiTH.



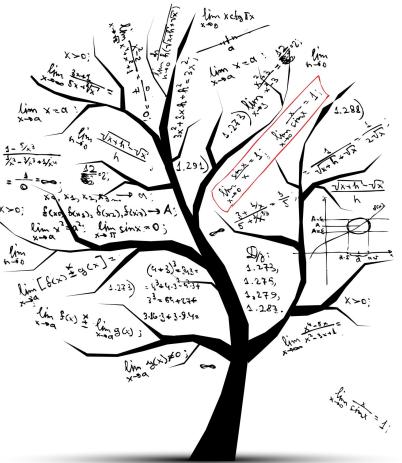
## Project Hackathon and Defense (PHD):

- No postponement of PHD allowed during the program.
- PHD can be conducted again only along with a future batch as it is a competition. It cannot be taken at your convenience.
- If you miss the immediate next PHD opportunity as well, you will not be provided further option of taking it again.
- You will also not be eligible for the scholarship for Phase 3 that is based on the PHD



# Seeking Help

- Contact relevant person(s) only.
- All contact details provided in the Guidelines document.



For any subject-matter help

Manoj | Gaurang |

Tarun | Nitish



All payments and loan related

Ravindra Karanam

Arpitha Lakkanna



For any in-class issues

Karthik Katamreddy

Reddaiah Kavuturu

## Some Good Practices

- Classes start at 9 AM. Please respect others' time. ROTEs conducted at 9 AM.
- Please switch off phones or keep them in silent mode. Please do not distract others.
- Please do not browse internet in class unless instructed to do so. We want you to learn.
- We take attendance in the last hour of the day. We do want you to learn.
- Please do not ask questions on topics not yet covered. No ransom will be paid for hijacking class discussions.
- Write all your exams.





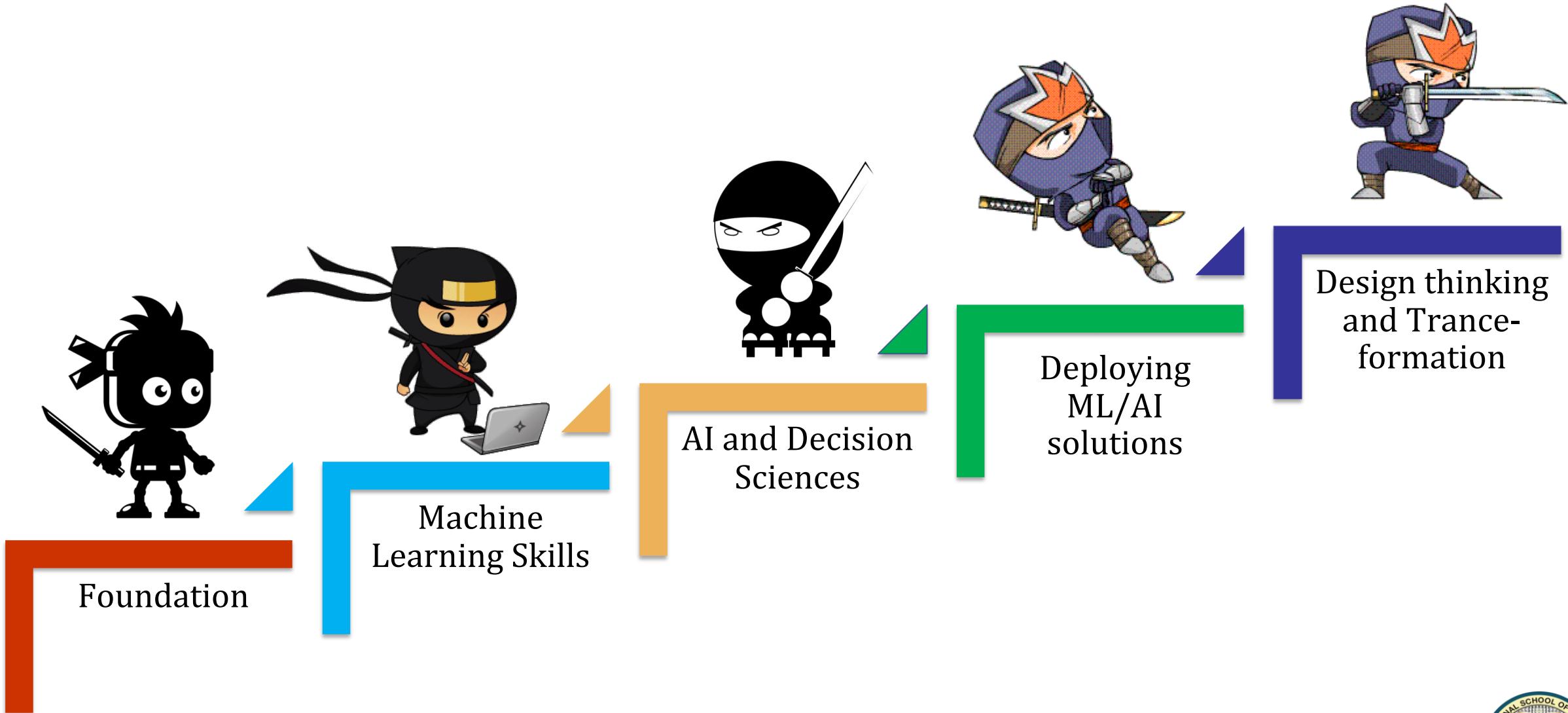




“Data is the sword of the 21<sup>st</sup> century. Those who wield it well, the Samurai.” – Jonathan Rosenberg,  
Advisor to Google Alphabet Ex-CEO, Larry Page



# Curriculum structure – how are we heading?



# R vs Python

Python, R, Both or Other Platforms for Data Science  
Source: KDnuggets Poll 2017

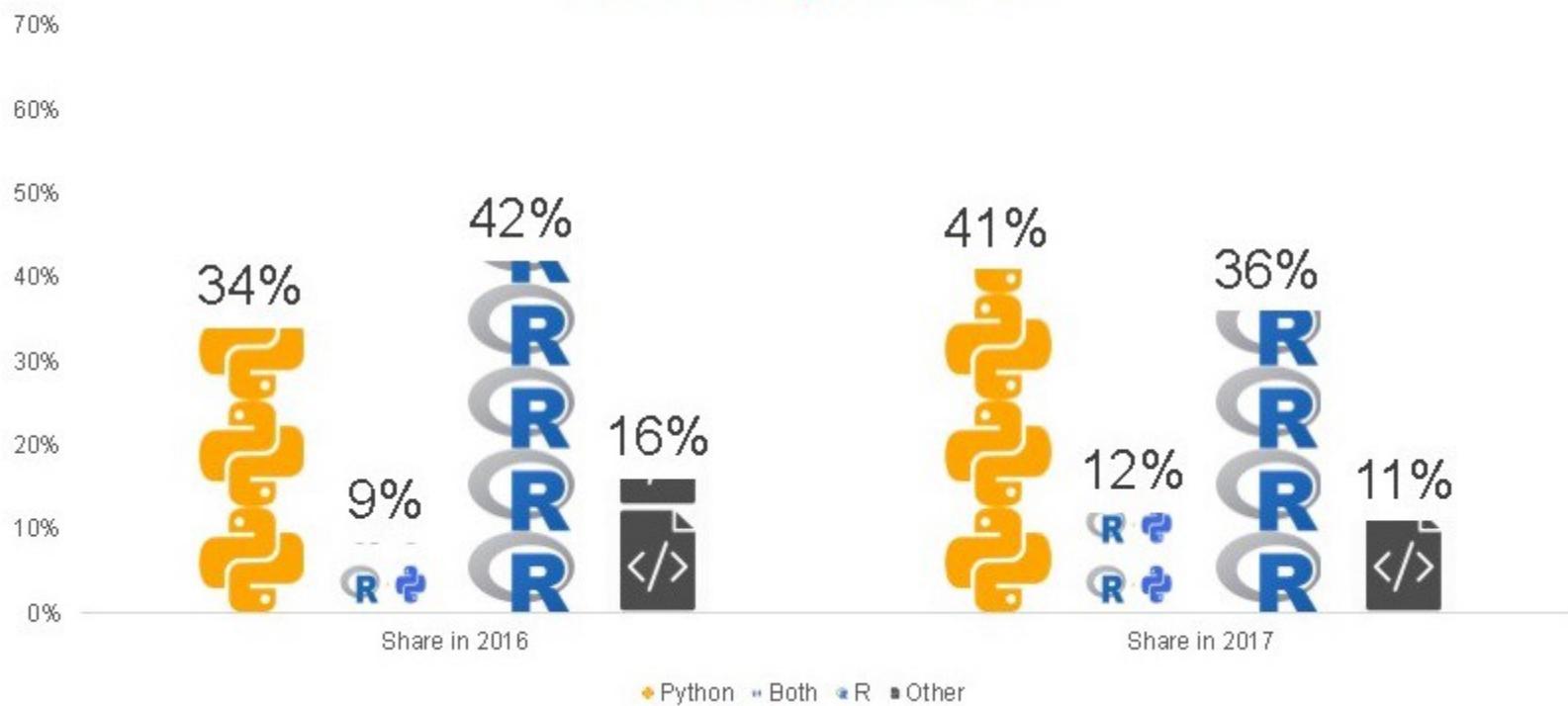


Image Source: <https://dzone.com/articles/r-or-python-data-scientists-delight>

<https://www.kdnuggets.com/2018/05/poll-tools-analytics-data-science-machine-learning-results.html>

# PGP Modules

1. Essential Engineering Skills Using R and Python
2. Foundations of Probability and Statistics for Data Science
3. Statistics and Probability in Decision Modeling
4. Methods and Algorithms in Machine Learning
5. The Art and Science of Storytelling with Data Visualizations
6. AI and Decision Sciences
7. Design thinking for Data Scientists
8. Deploying ML/AL
9. Trance-formation – The magic lies within YOU !



# Electives (2 Mandatory)

- Reinforcement learning
- Introduction to Computer vision and applications
- Foundations of Text mining and Natural Language Processing I
- Foundations of Text mining and Natural Language Processing II
- Foundations of IoT
- Operations Research for Industry 4.0
- Blockchain
- An Overview of Big Data and Hadoop Ecosystem

\*\* Nominations open after MiTH



# Specializations

- Advanced AI
- Big Data Engineering
- Digital Supplychain
- Financial Markets Analytics
- Healthcare Analytics

\*\* Applications open after MiTH



# Certification

**International School of Engineering**

*upon recommendation of the faculty and  
by authority of the Board of Directors,  
hereby confers upon*

**JOHN DOE**

---

**POSTGRADUATE CERTIFICATE IN DATA SCIENCE**

**with specialization in Financial Markets**

on successful completion of all the requirements of the  
352-hour program conducted between  
September 10, 2018 and January 23, 2019.

*This program is certified for quality of content, assessment and pedagogy by the  
Language Technologies Institute (LTI) of Carnegie Mellon University (CMU).  
The program curriculum has been developed in collaboration with LTI.*

**INSOFE**  
Inspire...Educate...Transform.

**Carnegie Mellon University**  
Language Technologies Institute

*Dated this second day of August, two thousand and seventeen.*

Dr. Dakshinamurthy V Kolluru  
President

Dr. Sridhar Pappu  
Executive VP – Academics



**International School of Engineering**

*awards*

**Certificate of Accelerated Engineering  
in Internet of Things (IoT)**

**to**

**JOHN DOE**

on successful completion of all the requirements of the  
80-hour program conducted between  
December 10, 2016 and June 04, 2017.

**INSOFE**  
Inspire...Educate...Transform.

*Dated this second day of August, two thousand and seventeen.*

Dr. Dakshinamurthy V Kolluru  
President

Dr. Sridhar Pappu  
Executive VP – Academics





### **HYDERABAD**

2<sup>nd</sup> Floor, Jyothi Imperial,  
Vamsiram Builders, Old Mumbai  
Highway, Gachibowli, Hyderabad  
- 500 032  
+91-9701685511 (Individuals)  
+91-9618483483 (Corporates)

### **BENGALURU**

L77, 15<sup>th</sup> Cross Road, 3<sup>rd</sup> Main  
Road, Sector 6,  
HSR Layout, Bengaluru – 560  
102  
+91-9502334561 (Individuals)  
+91-9502799088 (Corporates)

### **INSOFE - MUMBAI**

Kanakia Wall Street, 4th  
floor, Andheri - Kurla  
Road, Chakala, Andheri  
East, Mumbai,  
Maharashtra - 400093

Contact: +91 9502334561 / 9121020222 | Email: [info@insofe.edu.in](mailto:info@insofe.edu.in) | Website: [www.insofe.edu.in](http://www.insofe.edu.in)

[Facebook](#) | [Twitter](#) | [Linkedin](#) | [Youtube](#)