# Dilshad Ahmad

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## ➢ Key Skills and Research Interests

**Intelligent Power System, AI/ML/DL Application in Power System, Computer Vision, Pattern Recognition**

## ➢ EDUCATION

| Month/Year | Institute/University | Degree/Course | Class/Division |
|---|---|---|---|
| Sep 2017-<br>June 2022 | Huazhong University of Science and Technology, Wuhan, PR China | PhD in Electrical Engineering with Specialization in Power System Automation | 88.69%<br>(Ongoing) |
| July 2014-<br>May 2016 | Indian Institute of Engineering Science and Technology, Shibpur (An Institute of National Importance, India) | M.Tech in Electrical Engineering Specialization: Power Systems | 77.44 % (8.49/10)<br>(First Class Honors) |
| July 2008-<br>May 2012 | Uttar Pradesh Technical University, Lucknow | B.Tech in Electrical and Electronics Engineering | 65.56%<br>(First Class) |

## ➢ Experience

**Snyder Technologies** Sector 63, Noida, India
**Consultant-AI/Deep learning** April 2020-Present

- Worked on Deeplearning based pattern recognition for the clinical data

**Ideal Institute of Technology Wada, Mumbai University** Maharashtra, India
**Assistant Professor** July 2016- June 2017

- Taught and Facilitate the Course and Laboratory work for UG student: Power Electronics Application in Power System, Numerical Computational Methods
- Training and Placement Cell Coordinator

**Shanz Powertech Pvt Limited** Maharashtra, India
**Engineer (Electrical)** Sep 2012 - April 2014

- Project Management of power transmission line and infrastructure

## ➢ Research Experience

**State Key Laboratory of Advanced Electromagnetic Engineering and Technology**
**Huazhong University of Science and Technology** Wuhan, P R China
**CSC Fellow (China-India Bilateral)** Aug 2017- Present

- Advisor: Professor Shaorong Wang
- Topic: Application of Deeplearning in Power Line Fault detection

**Indian Institute of Engineering Science and Technology, Shibpur** West Bengal, India
**M. Tech Gate Scholar** July 2014-May 2016

- Advisor: Professor Chandan Kumar Chanda
- Thesis Topic: Some Aspect of Resiliency in Electrical Power Grid

## ➢ Industrial Training

**Bharat Heavy Electricals Limited, Insulator Plant, Jagdishpur** Uttar Pradesh, India

- Summer Industrial Training June 2011
- Topic: Work &Engineering Services Department Duration: 4 weak

**NTPC Limited, Tanda** Uttar Pradesh, India

- Summer Industrial Training June 2010
- Topic: Familiarization with Thermal Power Plant Duration: 4 Weak

## ➢ Leadership Experience

**Indian Institute of Engineering Science and Technology, Shibpur** West Bengal, India

- General Secretary, Hostel 14 Session 2015-2016
- Electrical Engineering Society (EES) member Session 2015-2016
- Lead team of 20 students for Travel and Accommodation management for the delegates of ICAMET2014, jointly organized by Indian Institute of Engineering Science and Technology (IIEST) Shibpur, India and Southern University Baton Rouge (SUBR), Louisiana, USA, at IIEST Shibpur

## ➢ Academic Achievements

- CSC Fellow (China-India Bilateral), Chinese Scholarship Council (2017-2021)
- Gate Qualified, 4 times with highest score of 661
- Received Gate Fellowship for M. Tech
- Highest Score in M. Tech Research in the Department (480 out of 500)

## ➢ Skills and Interests

- Computer: Python, C, MatLab, Simulink, PSCAD
- Language: Fluent in English, Hindi and Urdu
- Interests: Swimming, Indian History, Orwellian Literature

## ➢ Projects:

**Power Line Fault Detection:** Medium voltage overhead power lines run for hundreds of miles to supply power to cities. These great distances make it expensive to manually inspect the lines for damage that doesn't immediately lead to a power outage, such as a tree branch hitting the line or a flaw in the insulator. These modes of damage lead to a phenomenon known as partial discharge — an electrical discharge which does not bridge the electrodes between an insulation systems completely. Partial discharges slowly damage the power line, so left unrepaired they will eventually lead to a power outage or start a fire. Effective classifiers using this data will make it possible to continuously monitor power lines for faults.

**Method**: We applied Long Short Term Memory (LSTM) based model and developed a method to detect the fault based pattern in Partial discharge generated due to a fault. Bidirectional LSTM has also been tested in the place of LSTM layer. The model was further improved with various modifications, based on this study, "An Autoencoder and LSTM based PD Pattern Analysis for Fault Detection in MV Insulated Overhead Covered Conductor," is proposed and submitted for the publication in IEEE Transaction on Industrial Informatics (Impact Factor: 7.377). The current status of the paper is under review

**Outcome**: The project was successfully completed and the outcome can be seen in below given publications.

## ➢ Publications

**Dilshad Ahmad**, Shaorong Wang, "*An Autoencoder and LSTM Based Partial Discharge Pattern Analysis for Fault Detection in MV Insulated Overhead Covered Conductor*," IEEE Transactions on Industrial Informatics. (Submitted in May 2021, Current Status: under review)

**Dilshad Ahmad**, Shaorong Wang, "*Long Short Term Memory Based Deep Learning Method for Fault Power Line Detection in a MV Overhead Lines with Covered Conductors*," 21th National Power System Conference (NPSC20), IIT Gandhinagar, India, Dec 2020.

**Dilshad Ahmad**, Shaorong Wang, "*Bidirectional LSTM Based Partial Discharge Pattern Analysis for Fault Detection in Medium Voltage Overhead Lines*," 18th IEEE International Conference on Industrial Informatics (INDIN2020), Warwick UK, July 2020.

**Dilshad Ahmad**, Chandan Kumar Chanda, "*A Framework for Resilience Performance analysis of an Electrical Grid,"* 2nd International Conference on Control, Instrumentation, Energy and Communication (CIEC16), Kolkata, pp. 392-396, Jan 2016.

## ➢ PERSONAL PROFILE

Date of Birth: 14 January, 1990
Father Name: Ahmad Ali Khan
Mother Name: Aamina Khatoon
Passport No: N2813003
Nationality: Indian

## ➢ REFERENCES

**Dr. Shaorong Wang**
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