NIMA SAFARI

Ph.D. Electrical Engineering, P.Eng.

PROFILE

Electrical P.Eng. with 5+ years of experience in conducting studies and developing tools for renewable energy integration. Highly proficient in power systems analysis, programming, machine learning, and optimization. Motivated, responsible, problem-solver, goal-oriented, team player, and leadership management. Detail-oriented, with superior troubleshooting and analytical talent.

CONTACT

📱 (306)-280-1169

📍 Mississauga, ON

✉ n.safari@usask.ca

HONORS

Ranked 1st among all the undergraduate students in the power systems engineering department.

Received Dean's Scholarship, the most prestigious scholarships offered by the University of Saskatchewan to International Student to attract the talented students from all around the world.

WORK EXPERIENCE

Distribution Management System Software Developer, Survalent
May. 2021 - Present
- Provided consultation on implementation of power systems analysis methods in distribution management system development.

Electrical Engineer-in-Training, Grid Operations Support – SaskPower
Oct. 2018 - May 2021
- Fixed bug and converted legacy models/scripts for generation adequacy assessment to our new approach.
- Developed and implemented a security-constrained day-ahead planning tool which is being used by more than forty (40) operators as a decision support tool.
- Carried out statistical analysis for various power system problems and renewable integrations studies.
- Developed project management strategies to gain operators' buy-in with respect to using new power system operation tools.
- Took the lead in development, maintenance, and support for various power system operation and real-time renewable integration tools.
- Instructed operators and mentored senior engineer-in-traning memebers.
- Assessed the compliance of SaskPower's operation with NERC standards.
- Performed various power system studies and analysis, including power flow, contingency analysis, generation adequacy assessment, uncertainty modeling, etc.

Research Assistant – University of Saskatchewan
Sept. 2015 - Oct. 2018
- Took the lead in conducting various research and development projects on renewable energy integration.
- Collaborated with Senior Engineers at SaskPower and developed and implemented a short-term wind power forecasting tool. The efficacy of the tool was verified by SaskPower Engineers.
- Authored several conference and journal papers on renewable energy integration.
- Mentored and supervised two (2) summer students.

EDUCATION

University of Saskatchewan, Canada
09/2015 –10/2018
- Doctor of Philosophy in Electrical Engineering
- GPA: 93.5

Amirkabir University of Technology, Tehran
09/2012 –09/2014
- Master of Science in Electrical Power Engineering
- GPA: 90.8

QUALIFICATION

Project Management	95%
Customer Service	100%
Machine Learning/ Deep Learning	95%
Power System Optimization	95%
Statisitcal Analysis	95%
Power System Analysis	95%
Programming	95%
Technical Writing	95%

COMPUTER SKILLS

C++	● ● ● ○ ○ ○
GitHub	● ● ● ● ○ ○
MATLAB	● ● ● ● ● ●
Microsoft Office	● ● ● ● ● ○
PI DataLink	● ● ● ● ● ○
PI ProcessBook	● ● ● ● ○ ○
PowerOn Reliance EMS	● ● ● ○ ○ ○
Python	● ● ● ○ ○ ○
PLEXOS	● ● ● ● ● ○
R	● ● ● ○ ○ ○
SQL	● ● ● ● ○ ○
Visual Basic	● ● ● ○ ○ ○

RESEARCH INTERESTS

Distributed energy resource integration

Application of machine learning and optimization in power systems

Renewable energy forecasting

Application of data mining in power systems

K.N.Toosi Univsesity of Technology, Tehran
09/2008 –07/2012
- Bachelor of Science in Electrical Power Engineering
- GPA: 91.6

RELEVANT COURSEWORK

Fundamental of Computer & Programming, K. N. Toosi University of Technology

Distributed Generation, Amirkabir University of Technology

Power System Dynamics, Operations-Training-Solutions

Power Electronics, Amirkabir University of Technology

Reactive Power Control in Power Systems, Amirkabir University of Technology

Power Systems Analysis, University of Saskatchewan

Protection and Relays, K. N. Toosi University of Technology

Python 3 Programming Specialization, University of Michigan

PLEXOS Core Certification, Energy Exemplar

SQL for Data Science, University of California, Davis

RELEVANT MEMBERSHIPS

P.Eng., APEGS

IEEE Member, IEEE

TOP PROJECTS

PLEOXS Day Ahead IOP: A security-constrained day-ahead integrated operation planning tool that is used as a decision support tool by more than forty (40) operators for committing and dispatching generation units with consideration of hydro management constraints, renewable energy generation and load uncertainty, generation forced outages, etc.

Reliability Assessment of Microgrid: Proposing a hybrid analytical-simulation method to evaluate the reliability of a microgrid containing prioritized loads and distributed energy resources.

Definition of SaskPower Regulation Reserve Requirements: A framework is developed to estimate the regulation reserve requirement of SaskPower to handle renewable energy generation and load variabilities and uncertainties to meet NERC and interchanges requirements under various renewable penetration.

Met Tower Placement for Renewable Power Generation Facilities: Innovative statistical and machine learning techniques are developed for optimal placement of met towers for maximizing the wind power and solar power plant visibility.

Load Forecasting Tool: Developed a load forecasting platform to assess the impact of COVID-19 on SaskPower demand. Developed automated scripts to retrieve, process, and archive publicly available weather forecast data for load forecasting application.