

## **OBJECTIVE**

Graduate student looking for summer research internships on Power System State & Parameter Estimation research fields.

## **SUMMARY**

I am a master's student studying under the supervision of Dr. Murat Gol at Middle East Technical University with a major in Electrical Engineering. I am also a Research and Teaching Assistant at the same department. My main research area is Power System State & Parameter Estimation. I have experience in Kalman Filters and other estimators on MATLAB and Python. I have been a teaching assistant for Power System Analysis courses. I have worked on industrial projects where I implemented well-known state estimation tools.

## **RESEARCH INTERESTS**

Power System Static State Estimation, Power System Dynamic State Estimation, Parameter Estimation

## **EDUCATION**

### **Middle East Technical University**

*MSc. Electrical and Electronics Engineering, Power Systems*  
Supervisor: Dr. Murat Gol

GPA: 3.90/4

Ankara, Turkey  
2019 September – Present

### **Middle East Technical University**

*BSc. Electrical and Electronics Engineering, Power Systems*

GPA: 3.35/4

Ankara, Turkey  
2015 September – 2019 June

## **WORK EXPERIENCE**

### **Middle East Technical University**

*Research and Teaching Assistant, Department of Electrical and Electronics Engineering*

Ankara, Turkey  
2020 February – Present

- Power System Analysis I
- Power System Analysis II
- High Voltage Techniques I & II

### **Middle East Technical University**

*Project Assistant, Power System Analysis Laboratory*

Ankara, Turkey  
2019 June – Present

- Participated in projects mentioned in Projects section.

### **Ulusoy Electric**

*Intern, Production and Quality Control*

Ankara, Turkey  
2018 September – 2018 October

- Observed the production line of MV equipment.

### **AF-Mercados EMI**

*Intern, Distribution Network Planning*

Ankara, Turkey  
2018 June – 2018 September

- Worked at Master Plan of Firat DISCO.
- Modeled distribution networks of four cities on DigSilent Power Factory

## **PROJECTS**

### **Implementation of State Estimation Algorithm ASELSAN**

2020 January – 2021 April (Expected)

- Implemented traditional WLS-SE, Transformer Tap Estimator, Observability Analysis, and Bad Data Analysis tools on MATLAB.
- Implemented a Load Forecast Aided WLS Hybrid-SE.
- Wrote technical reports of Topology Processor and Hybrid-SE.

### **Power Plant Parameter Calibration Tool a Private Company**

2020 October – Present

- Implemented Ensemble Kalman Filter based Power Plant Parameter Calibration Algorithm using PSS/E API on Python.
- Presented algorithms on technical meetings.

## **ALGORITHMS & TOOLS**

- Weighted Least Squares, Kalman Filter, Extended Kalman Filter, Unscented Kalman Filter, Ensemble Kalman Filter, Newton-Raphson Method, Depth-First Search and experience on general optimization algorithms such as Genetic Algorithms, Bisection Search, Golden Section Search.

## **SKILLS**

**Programming Language:** Python, MATLAB

**Simulation and Analysis Software:** PSS/E (including psspy), DigSilent PowerFactory

## **COURSES**

- Power System Stability and Dynamics
- Power Systems Real-Time Monitoring and Control
- System Identification
- Optimization
- Power System Analysis I & II
- Distribution Systems
- Electrical Power Quality Monitoring and Improvement
- Nonlinear Control Systems
- Feedback Systems
- Economic Operation of Power System
- Linear Systems Theory

## **HONORS**

**National Academic Personnel and Postgraduate Education Entrance Exam (GRE Equivalent Exam in Turkey)**

*Ranked 313rd among 119000 participants*

**Dean's Honor Roll** *Achieved High Honor Roll 5 Times in 8 terms*

**National University Entrance Exam** *Ranked 1665th among 2 million participants*

## **LANGUAGES**

**English** *Professional working proficiency*

**Turkish** *Native*