Andualem Girma Kefeni | BERKELEY, CA

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EDUCATION

University of California, Berkeley, California   *Expected - Dec 2019*
Master of Science, Systems Engineering
Mastercard Foundation scholarship recipient
Relevant courses: Optimization models | Data Science for Human Mobility and Socio-technical systems | Scalable spatial analytics | Applications of Data Analytics | Control and Information Management | Energy systems and Control

Addis Ababa University, Ethiopia   *Sep 2011 - Jul 2016*
Bachelor of Science, Civil Engineering

SELECTED PROJECTS

Neural network and ARX prediction models   *2019*
- Formulated Neural network and ARX models for energy consumption and travel pattern of Electric Vehicles in Los Angeles, with a team of machine learning experts.
- Applied data cleaning and wrangling techniques to prepare a reliable hourly data of selected 7056 vehicles.
- Designed optimal charging time intervals and charging station locations, with +30% improvement on efficiency.

Spatial Analytics and optimization   *2018*
- Applied data wrangling techniques to prepare headwind dynamics data between Chicago, IL and San Francisco, CA.
- Formed an MPC algorithm to optimize flight path of Airbus 319, from ORD to SFO airport under dynamic headwind.
- Created a visualization of the optimal path for a fixed take off time and an average elevation pattern.

Data Visualization on Transportation Trends   *2018*
- Conducted a survey and collected data on red-light crossing patterns on two crossings at Telegraph Ave Berkeley, CA.
- Created visualizations of trends in red-light crossing behaviors of pedestrians in different times of the day.

WORK EXPERIENCE

Systems Engineer Intern | *Redhorse constructors, San Rafael, CA.*   *Jun 2019 - Aug 2019*
- Spear-headed a household water purification system optimization project with a team of engineers.
- Planned and executed an effective project schedule, improving team efficiency by 40%.
- Executed a post-implementation water quality test analysis using python scripting.
- Developed system design using hydraulic design concepts, optimization algorithms and AutoCAD.
- Achieved 70%+ efficiency in removal of water coliform content by constantly updating system design.
- Provided recommendations for improvement of water quality test methods for future prototypes

Property Valuation Engineer | *Cooperative Bank of Oromia, Addis Ababa, Ethiopia.*   *Dec 2016 - Aug 2018*
- Formulated intricate algorithms to calculate costs of infrastructures based on available data, resulting in over 30% increase in annual savings.
- Administered a market research and cost analysis for project materials to achieve cost efficiency
- Developed a detailed cost analysis of over 750 properties (buildings, factories, and farm facilities)
- Performed quality compliance assessment of properties, resulting in over 600 secured loans

Engineering Mechanics I Instructor | *Unity University, Addis Ababa, Ethiopia.*   *Oct 2016 - Jan 2017*
- Developed innovative class curriculum to provide basic understanding of the course for over 80 students.
- Conducted discussion sessions and personalized academic support sessions, providing clarification on lecture material and additional practice for new concepts.

SKILLS

- Python (Pandas, NumPy), R, SQL, MATLAB, Java, Unix, Fortran
- Machine Learning, Data Wrangling, Data prototyping, Data Visualization, AB testing
- Advanced MS Excel, AutoCAD, SAP, MS Project, ETABS

  Certifications: Python for Data Science (edX)