

Contact

www.linkedin.com/in/ming-yang-984a701a (LinkedIn)

Top Skills

Matlab

Simulations

Finite Element Analysis

Patents

Estimating accuracy of a remaining useful life prediction model for a consumable using statistics based segmentation technique

Predicting remaining useful life for a consumable using a weighted least squares regressions prediction technique

Ming Yang

Machine Learning, Data Analytics and Image Analysis/Computer Vision at Corning Incorporated
United States

Summary

- Leading scientist in computer vision and data analytics. Developing algorithm to accurately locate features on images, Optimizing industrial processes based on machine learning predictive models.
- Data Science: Machine Learning, data mining, quantitative analysis, and data visualization.
- Programming: Proficiency in R, Python, SQL, MATLAB, JAVA, and C/C++
- Advanced Engineering Analysis: Agent-based models, applied statistics, optimization theory, system control, simulations, numerical (finite element and finite difference methods) and analytical approaches, solid/fluid mechanics, thermodynamics, acoustics, stability/vibration, elasticity/fracture mechanics, impact/fatigue analysis, and the lean six sigma methodology
- Development of Advanced Simulation Tools: I have used advanced modeling theory to develop simulation tools for solving problems arising from disruptive technology.
- Smooth and Effective Communication Skills: I have worked extensively in both the research and production capacity and know how to communicate smoothly between the two.

Experience

Corning Incorporated

5 years 8 months

Senior Research Associate

July 2021 - Present (1 year 10 months)

United States

Research Associate

September 2017 - July 2021 (3 years 11 months)

Data analytics using various machine learning algorithms in material compositions, manufacturing processes and trend forecasting in glass, fiber optics and ceramics applications in displaying, communication and environmental industries.

Xerox

26 years

Senior Data Scientist

January 2010 - September 2017 (7 years 9 months)

Webster, New York

- Developed predictive, trend, and hypotheses-testing models in health care, financial services, transportation, and transaction process services using machine learning methods in a probabilistic perspective.
- Conducted data analysis using spatial-temporal, network graph, random forest, SVM, PCA, neural network, and other clustering / classification algorithms.
- Applications ranged from health care fraud detection, credit/debit card fraud detection, population health prediction, health care accessibility modeling (optimizing supply and demand), traffic flow and jam prediction, and urban mobility prediction.
- Developed in R, SQL (MYSQL, MSSQL, and Oracle SQL), JAVA, Python, MATLAB, and Hadoop in Windows, UNIX, and Linux environments.

PATENTS:

1. Wei Peng, Moshe Lichman, Tong Sun, Ming Yang, A population model to infer individual and/or group behavior using ID'd location data such as location based social networks, Filed (initiated 10/31/2013), patent pending
2. Ming Yang, A Segmented Temporal Analysis Model Used in FWA (fraud, waste and abuse) detection, Filed (initiated 10/29/2013), patent pending
3. Roof, Bryan J, Yeh, Andrew, Mizes, Howard, Du, Haitao, Yang, Ming, Face Recognition Business Model and Method To Identify Perpetrators of ATM Fraud, Filed (initiated 3/7/2014), patent pending
4. Guangyu Zou, Rakesh Kulkarni, Ming Yang, Methods, systems and processor-readable media for optimizing intelligent transportation system strategies utilizing systematic genetic algorithms, 9183742, 11/10/2015
5. Ming Yang, Marina L. Tharayil, William J. Nowak, Iterative learning control for motion error reduction, 9170532, 10/27/2015

6. Ming Yang, Diane M. Foley, William K. Stumbo, Guangyu Zou, Predicting remaining useful life for a consumable using a weighted least square regression prediction technique, 9134675, 9/15/2015
7. Ming Yang, Systems and methods for enhanced cellular automata algorithm for traffic flow modeling, 8738336, 5/27/2014

...

Senior R&D Specialist in Modeling and Simulation

1994 - March 2014 (20 years)

Webster, New York

- Led the development of an integrated modeling toolkit for simulation using statistics, agent based modeling theory, and nonlinear fluid and solid mechanics.
- The toolkit had more than 10 different applications, including
 - o Agent-based road traffic modeling
 - o System control and paper handling in high speed printing production systems
 - o Media curvature analysis (solid-fluid interaction)
 - o Belt / Web dynamic analysis
 - o Generic statistical engineering problems
- Proficiency in the whole life cycle of software development for large scale, reusable, and extensible object oriented simulation tools using UML, Design Pattern, and Lean/Agile Principles.
- Software developed in JAVA and C++.

Senior R&D Specialist in Technology Development

1991 - March 2014 (23 years)

- Led analysis tasks in structural mechanics, fluid-solid interactions and acoustics.
- Applied broad analytical skills to provide innovative solutions for complex engineering failure modes
- Used optimization technology for task scheduling and supply and demand distribution
- Guided technology and product development for media feeding, media transportation, and registration using advanced mechanical theory and system control technology
- Tools used: ABAQUS, ANSYS, CFDesign, Adina and MSC/NASTRAN, Solid Works, and MATLAB.

University of Rochester

Adjunct Scientist (3/94-3/95); Research Assistant (9/87-3/91)

1987 - 1995 (8 years)

Used nonlinear poroelasticity and other advanced biomechanics theories to model biomedical structures such as the human heart

Education

University of Rochester

Ph. D., Mechanical Engineering · (1987 - 1991)