

#### DESIGNERS LIGHTING FORUM

## Leveraging AI in Lighting to Design Occupant Experiences



Rob Groff



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Questions related to specific materials, methods, and services will be addressed at the conclusion of this presentation.





### **Learning Objectives**

At the end of this course, participants will be able to:

- Understand the basics of AI and how AI driven buildings can affect health, safety and welfare.
- 2. Dissociate from the AI buzz and learn how AI in lighting is leveraged in the real-world
- Understand how AI enables architects in designing spaces that are flexible, adaptable, aesthetically pleasing and sustainable
- 4. Learn how AI can be used for property management, space utilization and preventative maintenance





## **Presenters**



Colm Nee Chief Technology Officer



#### **Rob Groff**

Specification & OEM Lighting Partnership Manager

Colm, a visionary leader, joined Enlighted in 2019 as the Chief Technology Officer. Empowering a team of dynamic engineers and product enthusiasts, he spearheads product and technology strategies with a fervent drive for positive change.

Prior to Enlighted Colm excelled in data analytics at Allianz. He revolutionized investment products for institutional investors, leveraging cutting-edge data architecture and an analytics platform that set new industry standards. Rob has worked in the lighting industry for over 30 years as a business development leader for fixture and controls manufacturers. He began his career as a designer in the theatre and as an educator. His MFA from Northwestern University was the beginning of a career that has kept him immersed in the latest commercial and entertainment lighting and control technologies, advanced lighting controls solutions, connected lighting and IoT systems.



# in our daily lives

#### PERSONAL

- Virtual Personal Assistants
- Email and Social Media
- Navigation and Maps
- Smart Home Devices
- Personalized Recommendations

#### PROFESSIONAL

- Design Optimization and Simulation
- Automated Design Tasks
- Real-Time Adaptation and Analysis
- Creative Idea Generation



How can Al-driven lighting controls enhance energy efficiency in large commercial spaces?

- > Dynamic Energy Management
- Predictive Maintenance and Optimization
- Seamless Integration







What role does Al play in adaptive lighting design to improve occupant comfort and productivity?

- Personalized Lighting Experiences
- Dynamic Adaptation to Environmental Co
- Alignment with Circadian Rhythms



# How can AI help in the design process?

- Enhanced Creativity and Exploration
- Efficiency and Automation
- Data-Driven Decision Making







How can AI and machine learning be integrated into existing lighting systems for smarter control and management?

- Real-Time Adaptation and Optimization
- Predictive Maintenance and Fault Detection
- Seamless Integration with Building Systems



In what ways can AI assist in predictive maintenance and fault detection of lighting systems?

- Predictive Maintenance
- Automated Fault Detection
- Real-Time Monitoring and Analysis







How does Al facilitate personalized lighting experiences in diverse environments such as offices, hospitals, and retail spaces?

- Office: analyze work processes, attendance times, and individual preferences
- Healthcare: tailor lighting to support patient recovery and well-being
- Retail: dynamically adjust lighting for customer behavior, mood, and product displays



What are the potential challenges and considerations when specifying AI-enabled lighting systems for new and retrofit projects?

Interoperability and Compatibility

Data Privacy and Security

Cost and ROI Analysis







How can Al-driven analysis of lighting data contribute to sustainable building design and operations?

- Optimization of Energy Consumption
- Predictive Maintenance and Efficiency
- Data-Driven Design



What advancements in Al technology should lighting specifiers and designers anticipate over the next five years in the field of lighting controls?

System Integration

Advanced Predictive Maintenance

Enhanced Personalization







### This concludes The American Institute of Architects Continuing Education Systems Course



# For more information on Enlighted





### Session Abstract

This presentation explores how AI is used in lighting and lighting controls for crafting experiences that enhance occupant comfort while maximizing space utilization and energy savings. The presentation will demonstrate how AI in lighting control benefits architects in designing spaces that are flexible, adaptable, aesthetically pleasing and sustainable, while helping lighting designers understand how to embrace the most innovative lighting solutions in their plans. This session will take a deep dive into the technology behind the scenes, use cases and real-world examples.





## Thank you for attending!

Please scan the QR code to rate it and leave feedback.



Sutton North Room

LEDucation Presentation Committee

Wendy Kaplan, Kelvix | Craig Fox, ETC | Shaun Fillion, NYSID / RAB | Stacey Bello, KGM, Lighting

