

# AI for Architects

## Innovating Design with AI Advanced Technologies

### Course Overview:

This intensive course immerses architects and designers in the cutting-edge applications of artificial intelligence (AI) within architectural design. Participants will explore a diverse array of AI tools and techniques, gaining practical skills to revolutionize design processes and achieve new levels of creativity and efficiency. From foundational AI concepts to advanced model training, personalized workflow development, and practical applications of leading AI software tools, this course equips professionals with the knowledge and expertise to harness AI's transformative potential in shaping the future of architecture.

### Course Outline:

#### Module 1: Introduction to AI and Basics of Stable Diffusion

- Understanding foundational AI concepts and their pivotal role in reshaping architectural design practices.
- Comprehensive exploration of Stable diffusion platforms: Fooocus, Automatic1111, ComfyUI, and other leading tools.

#### Module 2: Basics of Prompt Engineering and Text-to-Image Design Production

- Mastering prompt engineering techniques essential for optimizing AI-driven architectural design outputs.
- Hands-on training in generating AI prompts and converting text descriptions into compelling visual designs.

#### Module 3: Image-to-Image Design Production

- Practical methodologies for leveraging AI to transform images into intricate architectural designs.
- Real-world case studies and exercises on implementing image-to-image AI applications in architectural contexts.

#### Module 4: Producing Designs using Stable Diffusion Models

- Advanced strategies for utilizing Stable diffusion models to generate complex and innovative architectural designs.
- Practical sessions focusing on maximizing design creativity and efficiency through Stable diffusion platforms.



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### **Module 5: Control Net Models and Their Impact on Design**

- Exploring the capabilities of Control Net models and their influence on enhancing AI-generated architectural designs.
- Integration techniques to optimize design outcomes and streamline workflows using Control Net models.

### **Module 6: Using Different Types of AI Models in Architecture**

- Comparative analysis of AI model types tailored for diverse architectural design tasks and challenges.
- Practical insights into selecting and deploying the most suitable AI models to achieve project-specific goals.

### **Module 7: Training Your Own LORA Model and Its Applications**

- Step-by-step guidance on developing and training customized LORA models tailored for architectural design applications.
- Real-world examples demonstrating the transformative impact of LORA models on design workflows and outcomes.

### **Module 8: IP Adaptor Technique for Design Control**

- Implementation strategies for the IP adaptor technique to effectively manage and refine AI-generated architectural designs.
- Practical exercises and applications showcasing the versatility and benefits of IP adaptors in design processes.

### **Module 9: Masking Ideas and Multi-Prompt Design Techniques**

- Harnessing the power of multi-prompt strategies and masking techniques to enhance creativity and innovation in AI-driven architectural design.
- Case studies and hands-on exercises illustrating effective integration of multiple prompts to achieve design excellence.

### **Module 10: Inpainting and Outpainting Techniques**

- Exploring advanced inpainting and outpainting techniques and their application in refining architectural design aesthetics.
- Practical workshops on implementing inpainting and outpainting strategies to elevate visual quality and coherence in designs.

### **Module 11: The Technology of Upscaling**

- Understanding AI-based upscaling technologies and their pivotal role in enhancing visual fidelity and quality in architectural design.
- Application-focused workshops on leveraging upscaling techniques to achieve superior design outcomes and client satisfaction.



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## Module 12: Creating Your AI Workflow for Architectural Design

- Tailoring a personalized AI workflow to optimize architectural design processes and maximize creative potential.
- Integration strategies for seamlessly incorporating AI technologies into existing workflows, driving innovation and efficiency in design practices.

### AI Software Tools:

- **Foocus:** Detailed exploration of Foocus platform functionalities and applications in architectural design.
- **Automatic 1111:** Practical workshops demonstrating Automatic 1111's capabilities in generating AI-driven architectural concepts.
- **ComfyUI:** Hands-on exercises utilizing ComfyUI for enhancing design productivity and creativity.
- **Kohya:** Case studies showcasing Kohya's contributions to AI-LORA model training
- **Archigen:** A new AI-powered platform for architectural and interior design
- **Many other tools and extension**

**Lead Trainer:** ARCHIGEN Team

**Delivery Format:** Interactive lectures, hands-on workshops, case studies, and guest presentations.



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