

Erik Verlage

Educational Software Developer

I am a scientist and educator who is passionate about creating interactive educational content for effective STEM learning.

EXPERIENCE

POSTDOC - EDUCATIONAL SOFTWARE DEVELOPER

AIM Photonics Academy at MIT, 2017-present

- Project lead and primary developer for the AIM Virtual Lab using Unity C#
- Currently designing game-based learning platform for photonics education
- Supervising teams of undergraduate students to create a library of educational simulations for photonic integrated circuit design and manufacture
- Developing content for two Massive Open Online Courses (MITx/edX)

EDUCATIONAL GAME DEVELOPER

Gamkedo Game Development Club, 2016-present

- Designed and released four games as lead programmer and project lead using Unity C# (2 games) and JavaScript / HTML5 Canvas (2 games)
- Experimented with original game mechanics and developed custom tools
- Managed remote teams and content specialists for each project
- Utilized rapid prototyping and incorporated feedback from playtesting

RESEARCHER

Joint Center for Artificial Photosynthesis at Caltech, 2012-2017

- Created two novel high-efficiency solar-driven devices that performed water electrolysis and CO₂ reduction for the synthesis of renewable fuels
- Acquired a broad overview of photovoltaic and electrochemical devices
- Developed expertise in semiconductor cell processing

RESEARCH ASSISTANT

MIT Media Lab, 2008 and 2010

- Integrated wireless biosensors into games made with Scratch to help autistic children recognize social cues
- Implemented voice recognition software for sociometric badges


EDUCATION

CALIFORNIA INSTITUTE OF TECHNOLOGY - PASADENA, CA


PhD in Materials Science, 2017


MASSACHUSETTS INSTITUTE OF TECHNOLOGY - CAMBRIDGE, MA

BS in Physics, 2011

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SKILLS

SOFTWARE

- Unity 3D
- Github
- Blender
- Adobe Creative Suite
 - Illustrator
 - Photoshop
- Slack
- Lumerical FDTD
- Microsoft Office

PROGRAMMING

- C++/C#
- JavaScript
- HTML5, CSS
- Python
- Matlab

WEBSITE

www.ErikVerlage.com

LANGUAGES

- English
- Spanish

