# William Daniels

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**RESEARCH INTERESTS**

image generation, generative adversarial networks, automatic colorization, contrastive learning, neuroevolution

**EDUCATION**

### Northwestern University

Master of Science in Computer Science — 2021 – 2023

- GPA: 3.92/4.00
- Thesis: Multi-Stage Automatic Line-Art Colorization with Style and Color Priors
- Committee: Dr. Aggelos Katsaggelos (Chair), Dr. Emma Alexander, Dr. Mohammed Alam

### Louisiana State University

Bachelor of Science in Computer Science, *Cum Laude* — 2019 – 2021

### University of Louisiana, Lafayette — 2016 – 2018

**EXPERIENCE**

### NASA, Goddard Space Flight Center

Fall Intern — 2022

- Developed multiple neural network regression models to predict in-situ water clarity from multispectral satellite data.
- Built a codebase for data collection, model training, and visualization with flexibility in mind for the NASA team going forward.
- Validated a variety of trained models (w/ various hyperparameters and architectures) for performance on multispectral/in-situ test sets.

### NASA, Goddard Space Flight Center

Summer Intern — 2022

- Developed multiple neural network regression models to predict in-situ water clarity from multispectral satellite data.
- Built a codebase for data collection, model training, and visualization with flexibility in mind for the NASA team going forward.
- Validated a variety of trained models (w/ various hyperparameters and architectures) for performance on multispectral/in-situ test sets.

**PUBLICATIONS**

[1] William Daniels, Troy Ames, Stephanie Schollaert Uz, and J. Blake Clark. (2023) Improving Extreme Value Prediction for Water Clarity Using Weighted Regression Models. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*. **[Accepted]**

**ABSTRACTS**

[1] William Daniels, Troy Ames, Stephanie Schollaert Uz, and J. Blake Clark. (2023) Improving Extreme Value Prediction for Water Clarity Using Weighted Regression Models. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS)*. (Oral presentation) **[To be presented]**

**HONORS AND AWARDS**

Tops Honors Award — 2016 – 2020

Magnolia Scholarship — 2016 – 2018

**ORGANIZATIONS** Northwestern AI Journal Club (AIJC), Member

- Presented thesis work “Multi-Stage Automatic Line-Art Colorization with Style and Color Priors”
- Presented review of “Hierarchical Text-Conditional Image Generation with CLIP Latents” by Ramesh, et al.
- Presented review of “Tag2Pix: Line Art Colorization Using Text Tag with SECat and Changing Loss” by Kim et al.
- Presented review of “Segmentation in Style: Unsupervised Semantic Image Segmentation with StyleGAN and CLIP” by Pakhomov et al.
- Presented review of “Unpaired Image-to-Image Translation of Cycle Consistent Adversarial Networks” by Isola et al.