Michael Cerny Green

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LinkedIn: www.linkedin.com/in/michael-cerny-green | Github: https://github.com/mcgreentn
Website: http://mikecgreen.com | Google Scholar: Michael Green

EDUCATION:

New York University, New York, NY
PhD – Artificial Intelligence, GPA: 3.83   *June 2022*
Lehigh University, Bethlehem, PA
B.S. – Computer Science and Business, B.A. – Classical Civilizations, GPA: 3.68   *May 2016*
Temple University, Rome, Italy
Study Abroad Semester – *Italian Art*, GPA: 3.59   *Fall 2014*

PROFICIENCIES AND SKILLS:

AI/ML: Pytorch, Pytorch-Lightning, Evolutionary Algorithms, Tree Search, Deep Learning, Reinforcement Learning
MLOps/Dev: Databricks, MLFlow, Neptune
Cloud/Infra: AWS (S3, Batch, EC2, DynamoDB, Lambda, Cognito), Docker, Kubernetes
Languages/Libraries: Python, C#, Java, Javascript, HTML, Scala, Pandas/Numpy, Plotly, React, Flask

WORK EXPERIENCE:

Hitachi Solutions America, Remote
Product Management   *August 2022-Now*
Product management of 20+ person development team building the Empower Data Platform.

- Strategic vision and execution of a multi-million-dollar annual budget for a self-service data orchestration product built on Azure and Databricks.

- Leading product management team through user research and buildout of solutions for data streams and artificial intelligence workflows.

- Creation, tracking, and accountability of quarterly OKRs to measure success and achieve product goals.

- Top-of-funnel demo creation, product pitching, public speaking (Data and AI Summit '23 and '24 speaker), and blogging (1, 2).

- Sales pitches, demos, and contract writing to drive revenue and 50%+ annualized program growth.

New York University, Remote
Adjunct Professor   *January 2023-Now*
Teaching professor at the Tandon School of Engineering teaching Video Game Design (CS-GY 4553/CS-UY 6553).

Origen.AI, Brooklyn, NY
Artificial Intelligence Engineering   *November 2018-Feb 2022*
Founding employee of a private, AI-applied technology platform startup developing models for the energy industry.

- Managed and executed platform deployment projects, capturing ~$300k in revenue in FY 2020, $1m in FY 2021

- Pitched to investors to close ~$1m in seed funding in FY 2021.

- Responsible for the creation and maintenance of cloud-agnostic artificial intelligence R&D framework using Pytorch and Pytorch-Lightning, accelerated computing using NVIDIA, containerized with Docker, and written in Python.

- Built a scalable AI/ML research pipeline using Neptune, AWS Batch, and AWS S3 for rapid model training on multi-gpu clusters.

- Peer-reviewed paper detailing a new network paradigm to solve non-linear partially differentiable equations using attention mechanisms and residual calculations (https://arxiv.org/pdf/2105.07898.pdf)

Imbellus, Inc, Los Angeles, CA, *AI/ML Engineer*   *May-August 2018*
PricewaterhouseCoopers, New York, NY, *Cybersecurity Consultant Intern*   *June-August 2016*
Lutron Electronics, Inc., Coopersburg, PA, *Software Engineering Intern*   *May-August 2015*

Procedural Content Generation

Automated generation of content using tree search, evolutionary optimization, or machine learning.

- [2017] "Press Space To Fire": Automatic Video Game Tutorial Generation – Michael Cerny Green, Ahmed Khalifa, Gabriella A. B. Barros, and Julian Togelius – EXAG Workshop at AIIDE 2017.

- [2018] Generating Levels That Teach Mechanics - Michael Cerny Green, Ahmed Khalifa, Gabriella A. B. Barros, Andy Nealen, and Julian Togelius - PCG Workshop at FDG 2018

- *****[2018] AtDelfi: Automatically Designing Legible, Full Instructions for Games - Michael Cerny Green, Ahmed Khalifa, Gabriella A. B. Barros, Tiago Machado, Andy Nealen, and Julian Togelius - FDG 2018

- [2019] Intentional Computational Level Design - Ahmed Khalifa, Michael Cerny Green, Gabriella Barros, Julian Togelius - IJCAI 2019

- [2020] Mario Level Generation From Mechanics Using Scene Stitching – Michael Cerny Green, Luvneesh Mugrai, Ahmed Khalifa, and Julian Togelius – CoG 2020

- [2020] Mech-Elites: Illuminating the Mechanic Space of GVG-AI - M Charity, Michael Cerny Green, Ahmed Khalifa, and Julian Togelius - FDG 2020

- [2022] Persona-driven Dominant/Submissive Map (PDSM) Generation – Michael Cerny Green, Ahmed Khalifa, M Charity, and Julian Togelius – FDG 2022

Automated Gameplaying Agents

Artificial agents that can play/win/explore.

- [2018] Automated Playtesting with Procedural Personas through Evolution Based MCTS - Christoffer Holmgard, Michael Cerny Green, Antonios Liapis, and Julian Togelius - TOG 2018

- [2019] Two-step Constructive Approaches for Dungeon Generation - Michael Cerny Green, Ahmed Khalifa, Athoug Alsoughayer, Divyesh Surana, Antonios Liapis, and Julian Togelius - PCG Workshop at FDG 2019

- [2019] Evolutionarily-Curated Curriculum Learning for Deep Reinforcement Learning Agents - Michael Cerny Green, Benjamin Sergent, Pushyami Shandilya, and Vibhor Kumar - RL Workshop at AAAI 2019

- [2020] Bootstrapping Conditional Gans for Video Game Level Generation - Ruben Rodriguez-Torrado, Ahmed Khalifa, Michael Cerny Green, Niels Justesen, Sabastien Risi, and Julian Togelius - COG 2020

Analytics and Statistical Analysis

Analyzing users/players and their behaviors.

- [2019] Automatic Critical Mechanic Discovery Using Playtraces in Video Games - Michael Cerny Green, Ahmed Khalifa, Gabriella A. B. Barros, Tiago Machado, and Julian Togelius - FDG 2019

- [2021] Game Mechanic Alignment Theory - Michael Cerny Green, Ahmed Khalifa, Philip Bontrager, Rodrigo Canaan, and Julian Togelius - FDG 20201

- [2022] Predicting Personas Using Mechanic Frequencies and Game State Traces – Michael Cerny Green, Ahmed Khalifa, M Charity, Debosmita Bhaumik, and Julian Togelius – WCCI 2022

*Best Paper Award   25+ published papers available upon request. Please see Google Scholar for more.

Programming Committees

Foundations of Digital Games (FDG)	2018-2023
Conference on Games (COG)	2019-2022
Procedural Content Generation Workshop at Foundation of Digital Games (PCG)	2019-2022
Portuguese Conference on Artificial Intelligence (EPIA)	2019
User Experience of Artificial Intelligence (UXOFAI)	2019, 2020, 2021

Scientific Journal Reviewer

Transactions on Games (TOG)	2018-2022, 2024

Local Co-Chairman of the AI for Games Summer School	2019