Michael Cerny Green

(901)-606-2270 mcgreentn@gmail.com
LinkedIn: www.linkedin.com/in/michael-cerny-green
Website: http://mikecgreen.com | Google Scholar: Michael Green

PERSONAL STATEMENT

AI researcher, engineer, and product leader. With a PhD in Artificial Intelligence from NYU and over 30 peer-reviewed publications, I specialize in translating cutting-edge research in AI to solving real-world problems. Currently, I am managing the product portfolio backlog of an Azure-based data platform as well as go-to-market activities with a team of over 50 engineers. As a public speaker, educator, and thought leader, I excel at simplifying complex AI concepts, whether presenting at global conferences like CES, solutioning with business leaders, or lecturing in university classrooms. I strive to empower my team to innovate faster, reach higher, and work smarter. My research field is in procedural content generation using AI algorithms.

WORK EXPERIENCE:

Director of Product Management, Hitachi Solutions America, Remote *Aug 2022-Now*

Product management of 50+ 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.
- Top-of-funnel demo creation, product pitching, public speaking (NRF-23, HIMMS-23, DAIS-23-24, CES-25), and blogging (1, 2).
- Creation, tracking, and accountability of quarterly OKRs to measure success and achieve product goals.
- Sales pitches, demos, and contract writing to drive revenue and 50%+ annualized program growth.
- Leading product management team through user research and buildout of solutions for data streams and artificial intelligence workflows.

Adjunct Professor, New York University, Brooklyn, NY *Jan 2023-Dec 2024*

Parttime adjunct professorship at the Tandon School of Engineering -- Video Game Design (CS-GY 4553/CS-UY 6553)

- 4.5/5 average overall satisfaction score amongst 70 students across two semesters.

Artificial Intelligence Engineering Lead, Origen.AI, Brooklyn, NY *Nov 2018-Feb 2022*

Founding employee of a private, AI-applied technology platform 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 papers detailing new network paradigms to solve non-linear partially differentiable equations using **attention mechanisms** (https://arxiv.org/pdf/2105.07898.pdf), published in **Nature** (https://www.nature.com/articles/s41598-022-11058-2)

EDUCATION:

New York University, New York, NY

PhD – Artificial Intelligence *Aug 2016-June 2022*

AI can do more than just learn from us. I build AI that can generate personalized, educational content.

Lehigh University, Bethlehem, PA

B.S. – Computer Science and Business, B.A. – Classical Civilizations *Aug 2012-May 2016*

PROFICIENCIES AND SKILLS:

Leadership: Team Management, Mentorship, Public Speaking, Program Design & OKRs, Executive Communcation

Technical: AI (supervised, unsupervised, tree search, evolutionary, embeddings), Azure (ai and data), Python, Pytorch, Data Lakehouse (Databricks, DLT, RAG, Fabric, Delta)

Product: Product Management, Solution Requirements, Marketing, Go-To-Market Strategy, Pitches, Demos

Hobbies: Competitive Sailboat Racing, Gardening, Sourdough Breadmaking, Video Game Design

CITATIONS AND RESEARCH:

Procedural Content Generation

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

- [2023] Level Generation through Large Language Models – Graham Todd, Sam Earle, Muhammad Umair Nasir, Michael Cerny Green, Julian Togelius - FDG 2023
- [2022] Learning Controllable 3D Level Generators – Zehuah Jiang, Sam Earle, Michael Cerny Green, Julian Togelius
- [2022] Persona-driven Dominant/Submissive Map (PDSM) Generation – Michael Cerny Green, Ahmed Khalifa, M Charity, and Julian Togelius – FDG 2022
- [2020] Mech-Elites: Illuminating the Mechanic Space of GVG-AI - M Charity, Michael Cerny Green, Ahmed Khalifa, and Julian Togelius - FDG 2020
- [2020] Mario Level Generation From Mechanics Using Scene Stitching – Michael Cerny Green, Luvneesh Mugrai, Ahmed Khalifa, and Julian Togelius – CoG 2020
- [2019] Intentional Computational Level Design - Ahmed Khalifa, Michael Cerny Green, Gabriella Barros, Julian Togelius - IJCAI 2019
- [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 – **BEST PAPER AWARD**
- [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
- [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.

Automated Agents

Artificial agents that can play/win/explore.

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

Analytics and Statistical Analysis

Analyzing users/players and their behaviors.

- [2022] Predicting Personas Using Mechanic Frequencies and Game State Traces – Michael Cerny Green, Ahmed Khalifa, M Charity, Debosmita Bhaumik, and Julian Togelius – WCCI 2022
- [2021] Game Mechanic Alignment Theory - Michael Cerny Green, Ahmed Khalifa, Philip Bontrager, Rodrigo Canaan, and Julian Togelius - FDG 20201
- [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

30+ published papers available upon request. Please see website for more.

EDUCATIONAL COMMITTEES:

Conference Peer-Review Boards

Foundations of Digital Games (FDG)	*2018-2025*
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)	*2019-2021*

Scientific Journal Peer Review Boards

Transactions on Games (TOG)	*2018-2022, 2024*