

Michael Cerny Green

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EDUCATION:

New York University, New York NY

PhD – Artificial Intelligence and Video Games - GPA: 3.83

May 2021

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

RESEARCH AND PROJECTS:

Automatic Video Game Tutorial Generation

July 2017-Present

Using a novel graph-based rule representation for video game rules, creating AI that can generate tutorials for any video game, starting with games in the GVGAI framework.

Publication: [2017] “Press Space To Fire”: Automatic Video Game Tutorial Generation – Michael Cerny Green, Ahmed Khalifa, Gabriella A. B. Barros, and Julian Togelius – Published at EXAG 2017.

Automatic Video Game Rule Generation

January 2017-Present

Using evolutionary techniques to generate new sets of rules for video games within the General Video Game Artificial Intelligence Framework (GVGAI). Also assisted in the creation of the rule generation competition track for GVGAI.

Publication: [2017] General Video Game Rule Generation – Ahmed Khalifa, Michael Cerny Green, Diego Perez-Liebana, and Julian Togelius – Published at CIG 2017.

Automatic Video Game Play-testing Agents

September 2016-Present

Using evolved Monte Carlo Tree Search AI and player modeling to automatically play-test video game levels for Minidungeons 2, a 2-D rogue-like, dungeon crawler.

Publication: Automated Playtesting with Procedural Personas through Evolution Based MCTS - Christoffer Holmgard, Michael Cerny Green, Antonios Liapis, and Julian Togelius - *conditionally accepted to the Transactions on Computational Intelligence and AI in Games (TCLAIG) journal*

Data Adventures - Open Data-Sourced Procedural Adventure Games

September 2016-Present

Creating murder-mystery game experiences using open data as a source, and studying the correlation between learning and fun through these experiences versus reading a Wikipedia page directly.

Publication: Who Killed Albert Einstein? From Open Data to Murder Mystery Games - Gabriella A. B. Barros, Michael Cerny Green, Antonios Liapis, and Julian Togelius - *conditionally accepted to the Transactions on Computational Intelligence and AI in Games (TCLAIG) journal*

WORK EXPERIENCE:

PricewaterhouseCoopers, New York, NY

June-August 2016

Cybersecurity Consultant Intern

200,000+ employee audit/assurance/advisory partnership company. Worked as a part of a 5-employee team specializing in cybersecurity for hospital, pharmaceutical, and health insurance companies. Drafted 25+ standards for clients documenting protocol for closing security vulnerabilities. Also created protocols for possible crises that may arise, in case of a security breach.

Lutron Electronics, Inc., Coopersburg, PA

May-August 2015

Software Engineering Intern

Reference: Todd Anderson, Software Engineer – tanderson@lutron.com

Private, 200+ employee electronics company specializing in aesthetic light control. Worked as a part of a 25-employee team on the Caseta Smart Bridge, which enables users to control Lutron dimmers and products with their smartphone. Using the Google server language known as GO, developed automatic error log email system to streamline customer support and responsiveness. Constructed foundation for the beginnings of third-party software integration (starting with Google Nest, the smart-home thermostat).

Tri-Champion Development, Bethlehem, PA

June 2014-May 2016

Founder

Private, 4-person video game development group. Spent 350+ hours managing the creation of the Stay Alive series, a pair of spaceship shooter games, which collectively have more than 500 downloads on the Google Play Store. Participated in the Global Game Jam (January 2015), a 72 hour mobile video game creation contest which resulted in Kairos Manor, an thriller puzzle game. Competed in mobiLehigh, Lehigh University's own mobile video game creation contest. Produced Cubes, a 3d reflexive dodging game, which won the "People's Choice Award" at mobiLehigh, out of 25 games.

FedEx Corporation – FedEx Services, Memphis, TN

June – August 2014

IT Information Security Intern

Reference: Kassandra Sanders, Director of IT Ops – kesanders@fedex.com

Public, 325,000+ employee shipping company. Worked as a part of a 5-employee IT risk assessment team. Introduced a COBIT-framework template to more easily compute and manage company-wide risk based off Ernst & Young risk assessments, cutting down the hours to gauge company-wide risk from 4 months to just 2 weeks. Developed an easy-to-use survey to assess vendor engagement risk, enabling managers to easily extract and analyze third-party risks.

Retrans, Inc. Precision Logistics, Memphis, TN

May - July 2013

IT Software Development Intern

Reference: Dr. Michael Bartz, CIO – mbartz@re-trans.com

Private, 100+ employee transportation-logistics company. Worked as a part of the IT team to strengthen the web framework system, by building an automatic, updating zip code-database program in Django, a high-level web framework for Python. Collaborated on the creation of database structures and how to manage them with the CIO.

LEADERSHIP AND ACTIVITIES:

University Productions: Special Events

August 2013 – August 2016

Student Activity Organizer

Largest student-run organization at Lehigh University. Hosts large student events and gatherings, like "Midnight Munchies" and "Halloween-fest". Help to plan, organize, and set-up such events for Lehigh students.

Association for Computing Machinery

August 2012 – August 2016

Programming Chair

400+ student-run organization promoting computer science education while hosting programming events. Responsible for Hackathon organization (college-run programming challenges) and mobiLehigh, a 2 month long mobile video game development challenge.