Adam Maciaszek

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TECHNICAL SKILLS

- Coding - Python, R, Pandas, MATLAB, Java, Bash/Shell Scripting, LaTeX
- Software & Development Tools – ArcGIS Pro, ArcGIS Online, GitHub, Linux, Excel & Microsoft Office Suite, Adobe Suite

EDUCATION

May 2024 **University of Massachusetts Amherst:** *Masters in Data Analytics*

- **GPA:** 3.8 **Relevant Coursework:** Machine Learning for Data Analytics, Text as Data, Network Analytics, Research Design, Python for ArcGIS, Advanced Computational Statistics, Social Media Analysis, Data Visualization

May 2021 **University of Massachusetts Amherst:** *B.S. Computer Engineering*

- **GPA:** 3.4 **Relevant Coursework:** Machine Learning, Computer Architecture, Signal Processing Methods,
- Continuous-Time Signals and Systems, Security Engineering, Systems Software & Networking, Information Technology

PROJECTS

LIGHT POLLUTION SIMULATOR

- Developed a Light Pollution Simulator website with ArcGIS maps and R Shiny, mapping and categorizing light pollution levels by Bortle factors and enabling users to identify any location's level
- Incorporated nine synchronized interactive star charts for each level within Leaflet maps for detailed star observation, accessible here

Senior Capstone Project: Shiver-Ring

- Engineered and prototyped a wrist-mounted flexible PCB device, detecting physiological signs of shivering to audibly alert users during hypoglycemic events; collaborated cross-functionally to execute remotely, ensuring seamless integration and functionality.
- Executed data sampling and analysis using FFTs and autocorrelation to detect shivering movements within the 8-12Hz range, triggering emergency alerts to family members or 911

Self Titled YouTube Channel - Adam Mac

- Created a dedicated channel focusing on the restoration and preservation of vintage animation. Utilized convolutional neural networks to enhance video quality by deinterlacing, upscaling, de-graining, and scratch removal
- Explored and demonstrated the conversion of early 20th-century stereoscopic 3D videos into modern virtual reality formats, preserving and revitalizing historical visual content

PROFESSIONAL EXPERIENCE

- **Billing Specialist / Technician**
  - May 2020 – Sept 2023, *MyEyeDoctor, Westfield, MA*
    - Used AcuityLogic Suite to query and update patients' medical history as well as all billing information
    - Worked with patients getting all the relevant information before the optometrist
    - Conducted diagnostic testing, including autorefraction and fundus photography on patients
- **AI Restoration Artist, Crows are White**
  - Jan 2022 - Apr 2022, *Freelance Work for director Ahsen Nadeem*
    - Restored animation on archival footage using a deep convolutional neural network (CNN).
    - Trained models to recognize specific film degradation, using machine learning techniques to improve the accuracy of restoration processes
    - Upscaled footage to remove grain and scratches, enhancing visual quality by employing advanced image processing algorithms. Manually edited errors, including scenes filmed for the documentary
- **AI Animation Restoration Artist**
  - Jun 2021 - Dec 2021, *Freelance for Director Matt Hartley*
    - Served as the sole restorationist for a fully animated feature using public domain animation
    - Coordinated with the animation team to overlay modern flash animation techniques
- **Data Archiver**
  - Sept 2013 - Feb 2018, *Polish Center of Discovery and Learning, Chicopee, MA*
    - Transferred data from paper documents and vinyl recordings to digital formats
    - Implemented an online database for archival access, improving the accessibility of historical records and enhancing research capabilities for scholars and the public.
    - Converted 78rpm records dating from 1900 to 1950 into digital format, resulting in over 1100 songs
    - Custom designed exhibits, including an interactive display that modified an antique radio for museum guests to request songs
- **Research Assistant**
  - May 2016 - Sep 2016, *Siena College, Loudonville, NY*
    - Conducted computer science virology research, programming simulations of viral capsid structures using the Monte Carlo method
    - Analyzed the geometric viability and thermodynamic stability of synthesized viral capsids