Jan Szczekulski

email website linkedin github

Education

UC San Diego **Sept. 2023 – Present**
Master of Science in Computer Science *San Diego, California*

University of Liverpool **Sept. 2017 – May 2020**
Bachelor of Science in Computer Science *Liverpool, UK*

Relevant Coursework

- Robotics and Autonomous Systems
- Object Oriented Programming
- Intro to Programming
- Introduction to AI
- Advanced AI
- Probabilistic Reasoning&Learning
- Computer Vision I
- Reccommendation Systems
- Data Mining and Visualisation
- Statistics, Linear Algebra & Calculus courses

Experience

The Hut Group **Dec. 2021 – Aug. 2023**
Software Engineer *Manchester, UK*

- I led the experimentable widgets project, which enabled the company to quickly and dynamically test changes to website's via A/B testing.
- As part of this project, I've made alterations to the larger internal architecture, including 4 core backends and 2 internal frontends. As of time of writing, this feature enabled 15 new A/B tests in only 2 months, all set up effortlessly via UI.
- Set up various CI/CD pipelines utilising shell, Jenkins, Docker & Kubernetes
- Mentored and led development of multiple juniors

The Hut Group **Sept. 2020 – Dec. 2021**
Graduate Data Scientist *Manchester, UK*

- Helped develop a company-wide ML algorithm and accuracy metrics for short-term demand forecasting
- I conducted 7 A/B/n tests, and performed thorough data analyses which resulted in £1million rise in sales year-on-year. Two of the A/B tests included forecasting time-series data utilising ML
- Improved and automated manual tools surrounding internal A/B testing platform such as duration estimation, results generation or metrics addition. Improved and set up acceptance and integration testing for multiple components, and improved robustness of CI/CD pipelines.
- Built data pipelines from scratch, including setting up virtual machines, Jenkins, and periodic scripts.

Lazarski University **June 2021 – Present**
Research Collaboration *Warsaw, Poland*

- Worked on research concerning PWS birthmark malformation
- Conducted retrospective data analysis of the past treatments to determine the best treatment approach for PWS birtmarks
- Utilized CNNs and transfer learning to roughly predict the patient's treatment's results.

University of Liverpool **June 2020 – Aug 2020; Aug 2022 - Aug 2023**
Research Assistant *Liverpool, UK*

- Worked on finding ways to increase the efficiency of geometric reconstruction of nanowires through the application of Convolutional Neural Networks (CNNs)

Projects

Monet-me-this web app | *Javascript, React, Java, Python, PyTorch, Linux* **November 2022**

- I developed and launched a full-stack web application game where players must determine which images were generated by a famous painters and which by the AI.
- Implemented a Generative Adversarial Network (GAN) Artificial Intelligence (AI) model which can turn any photograph into a painting that closely resembles the style of the master painters such as Monet or Van Gogh.

AI application in tomography reconustruction | *Python, Numpy, Tensorflow* **August 2022**

- I conducted a research study to improve 3D nanowire reconstruction using Convolutional Neural Networks (CNNs).
- The CNNs were trained to determine optimal angles for accurate reconstructions, minimizing discrepancies between 2D polygons and their re-constructed 3D counterparts

Technical Skills

Languages: Python, SQL, Java, Shell, JavaScript, HTML/CSS, C++,
Frameworks: PyTorch, Tensorflow, Pandas, Numpy, Matplotlib, React, Angular, SpringBoot
Technologies/Tools: Git, GH actions, Docker, Jenkins, Kubernetes

Publications

Journal Articles

- Anna Mataczynska, Michal Paprocki, **Jan Szczekulski** and Bartlomiej Kwiek. *Laser Therapy of Cutis Marmorata Telangiectatica Congenita Vascular Malformation.* **Dermato**, volume 29 2023
- **Jan Szczekulski**, Michal Paprocki, Ryan Butler, Anna Mataczynska and Bartlomiej Kwiek. *Investigating the effectiveness of convolutional neural networks in predicting the efficacy rate of treating port-wine stain birthmark.* **Journal of Investigative Dermatology**, volume 143 2023
- Michal Paprocki, Anna Mataczynska, **Jan Szczekulski** and Bartlomiej Kwiek. *The effectiveness of cutis marmorata telangiectatica congenita laser therapy.* **Journal of Investigative Dermatology**, volume 143 2023

Conference Proceedings

- Michal Paprocki, Anna Mataczynska, **Jan Szczekulski**, and Bartlomiej Kwiek. *Long term treatment of pws might require a new dual therapy consisting of induction and maintenance.* In 41st ASLMS Annual Conference on Energy Based Medicine& Science, in San Diego California, USA.