

# Jeronim Matijević

Zagreb, Croatia

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## Personal Profile

An ML Engineer with ~4 years of experience. My responsibilities have ranged from Software/ML/Research engineer as well as applied scientist. Affinity towards computer vision problems, but generally enthusiastic about neural networks for all purposes

## Work Experience

### Intis

Machine Learning Engineer

Zagreb, Croatia

Sep 2024 - Current

- Writing code for a fast and scalable planogram optimisation service, and a KYC user ID verification service
- Deployed both of these services and made sure they scaled and behaved nicely on the company's AWS kubernetes cluster

### TensorPix

Research Engineer (Computer vision)

Zagreb, Croatia

May 2023 - Aug 2024

- Trained and deployed efficient GAN video restoration/superresolution models, every model I shipped was faster and better than the one it replaced

### University of Zagreb, FER

Young Researcher (Computer vision)

Zagreb, Croatia

April 2022 - April 2023

- A collaboration between academia and industry. We helped develop solutions for inventory management in retail environments using computer vision. **project website**
- Studied the state of the art in depth estimation, neural radiance fields and oriented bounding box detection
- Used my novel evaluation metric to significantly reduce the memory footprint of my network.

### AI Technologies, d.o.o.

Computer Vision Engineer

Zagreb, Croatia

April 2021 - September 2021

- A proof-of-concept project where the goal was detection of broken insulators on powerlines. Data was gathered from drones.
- Wrote the entire NAS->inference->report pipeline. + trained the networks used

## Education

### Faculty of Electrical Engineering and Computing

MSc in Computer Science

Zagreb, Croatia

Sept 2018 - Current

- Paused, 14/18 courses completed
- Courses worth mentioning: Analysis and text retrieval, Neural networks, Artificial Intelligence, Machine Learning, Statistical Analysis of Data, Advanced Algorithms and Data Structures, Scripting languages, Computer Graphics

### Faculty of Electrical Engineering and Computing

BSc in Computer Science

Zagreb, Croatia

2015 - 2018

- Bsc Thesis: Method for counting people in sequences of images: **youtube clip**

### Science and mathematics high school

High School

Split, Croatia

2011 - 2015

- Participated in physics, math and programming competitions at various levels

## Service

**Reviewer** CVPR NTIRE2024 workshop

## Skills

**Python** asyncio, pytorch (lightning), airflow, xgboost, boto3, pandas, pytest, openCV, kornia, sklearn, numpy, multiprocessing  
**Programming** Linux, AWS, Kubernetes, Docker, Redis, RabbitMQ, kafka, bash, ffmpeg, C/C++, SQL/NoSQL  
**Miscellaneous** Reading ML papers,  $\LaTeX$ , CVAT, git, assembling computers for ML workflows, WeakAuras

# University/Hobby Projects

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I have created my own website to go in depth on all the projects I've worked on over the years, there i go more in depth explaining what I did and how + I wanted less words in my CV.

## My website/blog

### Fine tuning dreambooth to generate my favorite soccer player with the UCL trophy

Hobby

- I talk about it on [my blog](#)

### A world of warcraft fishing bot using computer vision

Hobby

- Check out the github repository here: [repo link](#)

### Projected GAN for art generation

Hobby

- Check out the demo here: [huggingface space](#)
- This network has gained some attention locally, and was displayed alongside Hana's work at multiple art galleries around the country

### Method for People Counting From Image Sequence

Bachelor Thesis, mentor: Sven Lončarić

- Check out the short demo here: [youtube video](#)

### Music genre classification from lyrics

Text Analysis and Retrieval course project

- You can check out the project report here: [Project Report](#)

### Pix2pixGAN for generating facial expressions

Neural Network course project

- You can check out the [Project Report](#) (This one is in Croatian)

### Fine-tuning english GPT-2 for rap lyric generation

Hobby

- Check out the demo here: [huggingface space](#)

### Retinal fluid segmentation using 2D U-net

Graduate project

- This was done as my graduate project, the dataset I had was the same one used in the **Retouch Challenge**. Experimented with different/new loss functions and observed how the end result changes with respect to the loss function with interesting results

### Using ESRGAN for achieving superresolution

Seminar Course

- Studied GANs and how they could be used for superresolution in images, and various difficulties the traditional approach had in achieving superresolution

# Awards and honors

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**Leader/Organizer of the sports climbing section at my university**, For two years I was responsible for leading the sports climbing section for my university's PE course.

**Croatian national high school physics competition 2014**,

# Languages and hobbies

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- English**    Fluent
- Croatian**    Native
- Hobbies**    Working with PC hardware, music, video games, bouldering, film,