

# Benjamin Dettling

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## Education

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### ETH

B.S. Computer Science

Zurich  
August 2021 - present

### Kantonsschule Im Lee

Matura with focus on Math/Physics and Ergänzungsfach Informatik

Winterthur  
2015 - 2019

## Leadership & Work Experience

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### West Coast Swing Winterthur

Dance Teacher

Winterthur  
April 2023 - present

- Taught people in privates, smaller/medium sized weekly classes, and bigger weekend workshops of up to 50 people
- Traveled across europe to participate in workshops (paris, lyon, budapest, milan, düsseldorf,...)
- Taught assistants how to teach themselves
- Participated and won in competitions, and taught specialized training for competition oriented dancing

### KSW

Nursing Intern ("Pflegepraktikant")

Winterthur  
August 2019 - Dezember 2019

## Projects

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### AI-Powered Medical Diagnosis App

Developed a **full-stack** web app to predict medical conditions based on user-entered symptoms.

- React + [Chart.js](#) frontend for interactive symptom input and probability visualizations
- [Node.js](#) + Express backend handling **OpenAI API** communication and state updates
- Fully deployed and accessible via a custom domain

### MNIST Digit Classifier with Drawing Interface

Built an end-to-end digit recognition tool with real-time canvas input and prediction output.

- Custom drawing canvas built with React and SCSS, enabling smooth user input and live feedback
- Self-trained PyTorch CNN served via **FastAPI**, handling preprocessing and inference with low latency
- Fully deployed and accessible via a custom domain

### Personal Portfolio Website

- Designed and deployed a modern, responsive personal website to showcase projects and skills.
- Built with **React + Vite + SCSS**, featuring a modular architecture and reusable components
- Integrated **i18n** for English/German language support and linked project subdomains (e.g., MNIST app)
- Deployed on **Netlify** with custom domain setup at: <https://benjamindettling.ch>

### Deep Learning Projects (PyTorch)

- Developed and fine-tuned deep learning models for Computer Vision, NLP, and Reinforcement Learning
- Implemented a CNN for MNIST and trained a **MobileNet**-based model for cat-dog classifier.
- Trained a Graph Neural Network (**GNN**) to solve mazes using message passing
- Built a **DQN** agent that successfully learned to play Flappy Bird using reinforcement learning
- Programmed using Jupyter Notebooks, Google Colab

## Additional Info

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- **Languages:** Python, C++, Java, JavaScript, TypeScript, React, Node.js, CSS, HTML
- **Software:** WebStorm, VS Code, PyCharm, Google Colab
- **Languages:** German (mother tongue), English