

# Emmanuelle Weber

San Carlos, CA

-Email me on Indeed: <http://www.indeed.com/r/Emmanuelle-Weber/d2aff5864409bc1e>

Life long learner and XR enthusiast, focused on bridging physics, technology, data science, biology, and chemistry to further our understanding of human health through improved imaging techniques.

## Work Experience

---

### Research Scientist

Stanford University - School of Medicine - Stanford, CA

January 2022 to Present

- Developed a multitask ML model to predict myelination levels of axons in the mammalian brain with the aim to enhance our understanding of epilepsy pathophysiology and improve the efficacy of non-invasive clinical MRI imaging for studying brain diseases.
- Responsible for all experimental design, execution, algorithm development and analysis. Managed collaborations across 4 labs.
- Created a data set for transfer learning based on limited available experimental imaging data supplemented with simulated images.
- Integrated computer vision techniques to improve clinical abdominal diffusion MRI (dMRI) image quality.
- Ongoing bimonthly meetings with industry collaborators to ensure clinical applicability.
- Collaborated with cross-disciplinary teams of scientists and clinicians
- Presented research findings regularly to collaborators, and at international conferences.
- Crafted grant proposals, securing funding for research initiatives.
- Mentored and guided students.
- Managed wetlab inventory and ensured adherence to safety protocols.

### Postdoctoral Fellow Stanford (CA)

Stanford University - School of Medicine - Stanford, CA

January 2019 to December 2022

Machine Learning - Image Processing - tissue clearing - diffusion MRI - Mixed Reality

### PhD thesis

Ecole Normale Supérieure - Paris (75)

October 2015 to November 2018

Collaborated with a diverse team of biologists, chemist, physicists, and engineers to boost NMR imaging sensitivity by leveraging low-temperature nuclear hyperpolarization.

### Master Thesis

Institut de Biologie Structurale (IBS) - Grenoble (38)

March 2014 to July 2015

Teamed up with biochemists, physicists and computer scientists to study large protein dynamics using NMR in solid and liquid states.

## Education

---

### **PhD in chemical physics**

Ecole Normale Supérieure - Paris (75)

2015 to 2018

### **Master's degree in Physics**

Joseph Fourier University

September 2013 to 2015

### **Bachelor in Physics and Engineering Sciences**

Strasbourg University

2010 to 2013

## Skills

---

- Python
- Unity
- Matlab
- DSISudio
- LaTeX
- numerical simulation
- AR Software Development
- C#
- Image Processing
- FSL
- Data Analysis
- Fiji
- Excel
- Slicer
- Power Point
- Machine Learning
- Spectroscopy
- Linux
- Computer Science
- AI
- Git
- Computer vision (4 years)