Amith J. Kamath

Researcher

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Areas of Expertise

Computer Vision, Machine Learning, Software Architecture.

Academic Background

2023 – 2026 **SITEM Insel at University of Bern** , Bern, Switzerland.
Master of Advanced Studies in Translational Medicine and Biomedical Entrepreneurship
Exploring translational potential of AI-based workflow enhancements in radiation oncology

2021 – 2025 **University of Bern** , Bern, Switzerland.
Doctor of Philosophy - Biomedical Engineering at the ARTORG Center
Dissertation on: "Fast and Reliable AI-based Dosimetric Contour Quality Assurance for Radiotherapy"

2016 – 2020 **Georgia Institute of Technology** , Part-Time, Online.
Master of Science, Computer Science
Coursework only; including Computer Vision, Software Architecture, Machine and Reinforcement Learning

2010 – 2012 **University of Minnesota Twin Cities** , Minneapolis, MN.
Master of Science, Electrical Engineering
Dissertation on: "A generalized CSA-ODF model for Fiber Orientation Mapping"

2006 – 2010 **National Institute of Technology Karnataka** , Surathkal, India.
Bachelor of Technology, Electrical Engineering
Dissertation on: "A Novel Device to Monitor the Mobilization of Fingers During Treatment for Stiffness of Tendons"

Professional Experience

University of Bern, Bern, CH

October 2025 – September 2026 (1 year) **Venture Fellow**.
+ Exploring translational potential of AI-based workflow enhancements in radiation oncology.

The MathWorks, Bern, CH, Natick, MA and Bangalore, India

March 2023 – March 2025 (2 years) **Uni-Bern MathWorks Student Ambassador**.
+ Designed hackathons, workshops and teaching content for MATLAB with 150+ community members. Also wrote matlabmedmnist.

July 2019 – October 2021 (2 years, 4 months)

Product Manager - AI in Academia (Asia Pacific).
+ Preparation and delivery of talks and hands-on workshops on Machine Learning and Computer Vision in $>$ 40 events and conferences.

November 2014 – June 2019 (4 years, 8 months)

Software Engineer - Computer Vision .
+ Improved performance of video reading to $>$ 60fps, color conversion functions by $>$ 20x, morphological operators by 3x; Developed file I/O capabilities for NIfTI to enable complete neuroimage workflows in MATLAB.

February 2013 - October 2014 (1 year, 9 months)

Trainee - Engineering Development .
+ Mentored a summer intern on a software testing project on a custom MATLAB toolbox for automating team activities.

Vital Images Inc. (now Canon Medical), Minnetonka, MN

October 2012 - February 2013 (5 months)

Software Engineering Intern.
+ Added new features in a QT based GUI to overlay annotations and rulers in different fonts, colors and sizes on 3D volume visualizations.

Center for Magnetic Resonance Research, Minneapolis, MN

September 2011 - October 2012 (1 year, 6 months)

Research Assistant.
+ Research on image acquisition protocols for Diffusion MRI based on maximizing spatial information using Spherical Harmonics, multi-tensor models, and model-free methods.

Frameworks/Tools of Choice

Languages	python, MATLAB, C, C++, shell scripting, LaTeX 2_ε
Tools	VS Code, PyCharm, QT, cmake, git

Selected Awards

2025	One of 5 grantees of the Uni Bern Venture Fellowship for 2025/26.
2024	Awarded CHF 4300 under the Young Researcher Promotion fund to organize a one-day Bern AI in RadioTherapy Symposium.
2023	2nd place in the Student Paper competition at EMBC 2023 - out of 15 finalists and $>$ 100 accepted papers.
2022	Winner of the 2022 MICCAI Hackathon , on quantifying annotator/data uncertainty in brain lesion segmentation problems.

External Links and Publications

GitHub	www.github.com/amithjkamath
LinkedIn	www.linkedin.com/in/amithjkamath
Scholar	scholar.google.com/citations?user=clej42kAAAAJ