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Yimeng Dou

Education

B. S. in **Biomedical Engineering** with a minor in **Computer Science**
University of California, Davis
Fall 2017 grad

Conference Proceeding

Submitted

- **Y. Dou**, Y. Tsai, C. Liu, B. Hobson, and P. Lein. Colocalization of fluorescent signals using deep learning with a novel Manders overlapping coefficient loss.

Conference Abstract

- **Y. Dou**, Y. G. Abdelhafez, and A. J. Chaudhari. Development of TextIriX: A Texture Analysis Plugin for OsiriX, Radiological Society of North America (RSNA) Scientific Assembly and Annual Meeting. Chicago, USA, Dec 1-6, 2019 (Applied Science, Radiology Informatics).
- Y. G. Abdelhafez, **Y. Dou**, T. Yen, C. Liao, and A. J. Chaudhari. Radiomic Features from 18F-FDG PET/CT in Patients with Oral Cavity Squamous Cell Carcinoma, Radiological Society of North America (RSNA) Scientific Assembly and Annual Meeting. Chicago, USA, Dec 1-6, 2019 (Oral, Molecular Imaging).
- Y. G. Abdelhafez, **Y. Dou**, L. Nardo, T. Yen, C. Liao, and A. J. Chaudhari. 18F-FDG PET/CT radiomic predictors of molecular markers expression in oral cavity squamous cell carcinoma, European Association of Nuclear Medicine (EANM) Congress, Barcelona, Spain, Oct 12-16, 2019 (Oral, Featured Session on Implementing Radiomics into Technical Practice)
- B. A. Hobson , **Y. Dou** , S. Bandara , D. Rowland , Z. Harmany , D. Bruun , D. Harvey , A. J. Chaudhari, and P. J. Lein. Neuroinflammation Detected by Longitudinal TSPO Positron Emission Tomography (PET) Is Associated with Deficits in Learning and Memory in a Rat Model of Acute Organophosphate (OP) Intoxication [BH1]. In: *2019 Annual Meeting Abstract Supplement*, Society of Toxicology, 2019. Abstract no. 2156.

Activities & Awards

- Society for Imaging Informatics in Medicine (SIIM) innovcation Challange Semi-finalist, (2018), title: “Development and validation of TextIriX: a texture analysis plug-in for OsiriX.”
- SF AAPM Young Investigators Symposium (2017), title: “Design of a multiplexer circuit for efficient use of detector electronics in PET scanners.”
- Team (Maia Health) presentation at Caravan Studios’ Apps4Change Demo Series (2017).
- Team (Maia Health) presentation at Youth Tech Health Live (2017), title: “Bridging the Gap between pediatric and adult healthcare.”
- Finalists (Maia Health), David Kirp Prize (2017).
- UC Berkeley Big Idea business competition Finalist (2016-2017) with Maia Health.
- UC Davis Big Bang business competition Finalist (2016-2017) with Maia Health.
- Winner team at Making More Health program by Youth Venture and Boehringer Ingelheim (2016).
- Stanford MedX competition winner, https://medium.com/@fungfellows/from-idea-to-impact-in-a-weekend-fung-fellows-win-stanfords-medx-competition-2fe4c0a568d0 (2016).
- UC Davis Provost's Undergraduate Fellowship (2015-2016).

Experience

Junior Specialist, Summer 2018 to now
Lein Lab, Molecular Biosciences, School of Veterinary Medicine, UC Davis

- Write a pipeline for PET analysis and create reference regions of interest on the Cerebellum.
- Analysis EEG data to find biomarkers for characterization and seizure detection.
- Write pipeline for resting state fMRI analysis.
- Develop and validate a deep learning framework cell detection with novel loss function (paper submitted).

Analyst, Fall 2017 to Summer 2018
CMGI, Department of Biomedical Engineering, UC Davis

- Analysis PET data using kinetic modelings from PMOD.
- Perform statistics analysis on kinetic modeling results (Simple Tissue Model and Logan Reference) for various projects.
- Develop SOP for PET registration to MR data.
- Adjust VOI drawing from A0 to T2.
- Develop a fat segmentation pipeline for MR using machine learning algorithms.

Research Intern, Summer 2017
Department of Radiology, UC Davis Medical Center

- Develop the texture analysis plugin for Osirix, TextIriX.
- Learn state-of-the-art texture classification algorithms.

Co-funder, Fall 2016 to Fall 2017
Maia Health http://www.maiahealth.com/

- Develop Maia Health Mobile App.
- Participate in meeting to manage the company.
- Meet with venture capitalists for potential investment.
- Participate in business competition and conferences for more exposures.
- The crunchbase webpage: https://www.crunchbase.com/organization/maia-health#section-overview.

Undergraduate Researcher, Winter 2015 to Spring 2017
Badawi Lab, Department of Radiology, UC Davis Medical Center

- Conduct project, “Design of a multiplexer circuit for efficient use of detector electronics in PET scanners”, and under the supervision of Dr. Ramsey Badawi and Dr. Buddika Sumanasena.
- Have experience in circuit fabrication, data/signal processing, micro-controller programming, radiation detection and measurement, and data processing.
- Get PUF funding for building prototype of multiplexer.
- Build a preliminary Positron Emission Tomography Scanners Modules using NIM system.
- Present at SF AAPM Young Investigators Symposium May 2017 at USCF.

Pre-vet programming coordinator, Fall 2013 to Fall 2014
Pre-Health student conference, Davis, California

- Invite speakers, deans, and administers from veterinary schools via email, letter, and

phone calls.
- Create and send introduction letters, and itineraries.
- Oversee speaker experiences at the conference.
- Invite and contact deans to participate in panels, and create schedules for deans' panels and be the point of contact for deans and their assistants.
- Perform outreach to expand and build the Pre-Veterinary Program.

Special Skills

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- Computer language and toolkit package: C, C++, Fastai, ITK, Java, Javascript, Matlab, mmdetection, Node.js, Rust, Python, Pytorch, VTK.
- Software: Autodesk Eagle, Solidwork, PMOD.
- CAD design, Circuit Board Design.
- Nuclear Instrumentation Module (NIM) data acquisition system.