Karthik Nambiar

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I'm a multidisciplinary researcher and learner in the data science and biomedical field. My experience gives me a broad base of knowledge to pull from for any project and my passion lets me stick to any problem until I've figured and resolved the issue I've always been adaptable to any problem in the lab, when analyzing research problems, or in the workforce, and look forward to using those skills to help solve data science problems.

Work Experience and Projects

May 2022- Jun 2022 **Census OCR Image Classification**

- Gathered data from 1950 raw census image files
- Processed data using image segmentation techniques and labeled text for modeling
- Created a machine learning model using transfer learning techniques to better read text and help set data into digital tables in an automated fashion.
- Used model to analyze earlier census data and understand differences in censuses

Apr 2022 **Natural Language Processing Text Classification**

- Gathered data on different social media post clusters and processed it
- Used data to make predictions on where given posts came from, rigorously tested
- Used Naive Bayes, SVM, Random Forest classifiers, discerned which ones were most useful
- Presented findings to group of data scientists to explain the model in an organized manner.

Jun 2020- Mar 2021 **Epic Technical Solutions Engineer**

- Worked in a team to facilitate usage of Epic healthcare data software.
- Coded better implementations of Epic software to help various clients improve their healthcare data experience using MUMPS, Cache, and Visual Basic.
- Ensured compliance with Epic and FDA standards in healthcare data upkeep
- Worked to help create a new healthcare-related relational database

Aug 2018- May 2020 **NIRS Brain Imaging Project**

- Worked with Prof. Kainerstorfer on collecting longitudinal Near-InfraRed Spectroscopy(NIRS) data from children using a novel sensor
- Collated, tested different filters, and analyzed data in various ways in MATLAB
- Analyzed resting brain state and child psychometric tests to find correlations
- between improvement in cognitive function, NIRS data, and other child demographic information, such as age and gender.
- Presented findings on child cognitive function and NIRS with team of psychologists.

Aug 2017- May 2018 **Nerve Histology Honors Thesis**

- Fixed rat sciatic nerves and observed slices of nerve tissue via various microscopy techniques.
- Developed MATLAB computer vision algorithm to determine health of nerve tissue based on various biological factors and geometries and presented findings to experts in the field.

Skills

Well versed in: Data Science, Python, MATLAB, SQL R, Java, QGIS, Solidworks, Arduino, desktop MR systems, Mammalian Cell Culture (MCF-7), Transmission Electron Microscopy, Nerve Histology, Epoxy sectioning, Circuit wiring, lipid-gene transfection

Education and Experience

Mar 2022-Present **General Assembly Data Science Fellow**

Aug 2018-May 2020 **M.S.E Biomedical Engineering, Carnegie Mellon University**

Aug 2014-May 2018 **B.S.E Biomedical Engineering, B.Sc. Mathematics, Arizona State**