

AKSHAT PATNI

PROJECTS & RESEARCH

PARALLEL PROGRAMMING – K-MEANS CLUSTERING

- Used shared memory parallel programming (OpenMP) to create an optimized K-Means clustering data algorithm

DEEP LEARNING – TENNIS ANALYTICS

- Using PyTorch deep learning library on spatial data (video) to track and model tennis matches and create accurate positional data
- Using positional data to develop advanced tennis analytics

FRESHMAN RESEARCH INITIATIVE – ASTRONOMY

- Applied machine learning methods to image frames captured via telescope to create an object tracking algorithm for White Dwarf stars

NEUROSCIENCE REVIEW ARTICLE – PEG FUSION

- Completed written research thesis for Neuroscience program
- Written review article studying PEG fused allografts and context within larger summary of nerve damage repair

PROJECT PORTFOLIO

- For a more comprehensive look at my projects and work, please take a look at my portfolio hosted on my github repository

WORK EXPERIENCE

RESEARCH ASSISTANT - Department of Petroleum Engineering

The University of Texas at Austin, Austin, TX / June 2021 - Present

- Applying data science and machine learning methods to drilling sensor datasets to analyze mud motor failures
- Working closely with corporate sponsors during research team meetings and presentations, delivering actionable insight
- Working to develop algorithm to track mud motor failure in real time

EMERGENCY MEDICAL TECHNICIAN

Evin's Medical Staffing - APH, Austin, TX / Mar 2021 – August 2021

- Organized and managed observation areas at different COVID-19 vaccination sites as an EMT under Austin Public Health
- Performed medical interventions on patients who suffered acute reactions to COVID-19 vaccine and administered vaccines to patients

CLINICAL ROTATION - EMS & Emergency Department Employee

St. David's Medical Center, Austin, TX / Jul 2019 - Aug 2019

Marble Falls EMS, Austin, TX / Jul 2019 - Aug 2019

- Completed in-hospital and in-ambulance clinical requirements for graduation of EMT program
- Assisted doctors and nurses during non-surgical procedures with equipment handling, patient assessment, and delivery of treatment
- Executed diagnostic tests and administered treatments on patients during ambulance transport alongside paramedics

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Portfolio Link:

<https://apatni97.github.io/>

EDUCATION

THE UNIVERSITY OF TEXAS AT AUSTIN

Austin, TX

BSA Neuroscience (Dec 2020)

Certificate in Data Science and Scientific Computation (Expected graduation Aug 2021)

LIFESTART EMT SCHOOL

Austin, TX

Licensing and Certification EMT (Aug 2019)

ADDITIONAL SKILLS

- Programming languages (Python, R-Studio, C++)
- Python scientific libraries
- TensorFlow & PyTorch
- OpenMP & MPI parallel programming API extensions
- Critical Thinking
- Leadership & Communication

RELEVANT COURSEWORK

Data Science

- Elements of Computing
- Parallel Computing
- Computational Bioinformatics
- Differential Equations
- Vector Calculus
- Linear Algebra