Brandon Touchet | Resume

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Skills

Ansys, Adobe Photoshop, Adobe Illustrator, C++, COMSOL, CSS, HTML, Inkscape jQuery, Matlab, Mathematica, Mendeley, LaTeX, Octave, PowerBI, PYTHON, SQL, Tableau

Experience

Scientific Data Analysis Researcher — **2017-Present**
Biodesix — *Steamboat Springs, Colorado*

Instructor of Physics — **2017-Present**
Colorado Community Colleges Online — *Colorado*

Graduate Researcher — **2012–2016**
Louisiana Tech University — *Ruston, Louisiana*

Consultant — **2011–2012**
Beta Land Services, LLC — *Colorado, Illinois, Ohio, Louisiana, Wyoming*

Education

Louisiana Tech University — **Ruston, LA**
PhD Engineering Physics — *2016*

Louisiana Tech University — **Ruston, LA**
MS Applied Physics — *2016*

University of Louisiana — **Lafayette, LA**
BS Physics — *2011*

Highlights

Biodesix: Responsibilities are wide-ranging but generally consist of quality control and assessment of clinical mass spectrometers and the spectra they produce, data visualization, data mining, metric development, project management, and analysis of our research approaches. I have also developed a novel averaging method that improves resolution and reduces noise of clinical, Deep MALDI spectra and a real-time monitoring tool (integrated with Tableau visualization software) for mass spectrometers. This tool quantifies and qualifies machine state, forecasts mechanical machine issues, and assist with machine tuning.

PhD: I was able to classically resolve the electron self-energy paradox ($E(electron) \neq mc^2$) through the notion of space being non-empty. Further implications show quantum-like phenomena from the classical scale that also agree with experiment. This is the first classical theorem that can successfully account for pair annihilation (electron+positron='BOOM'), as is commonly encountered with PET imaging.

Beta Land Services: Built a centralized SCRUM style database for land analysis reports and associated documents while managing a team of 30 people in the busiest oil county in Colorado. I was subsequently sent on high priority projects in Wyoming, Illinois, Ohio, and Louisiana.

ULL: Performed research on characterization of metal alloy elastic properties, dark matter via statistical analysis of Type Ia supernova data, and developed non-incendiary tracers for the US Army. The tracers are now commercially available at Cabela's and online as "Glow Ammo" and involved building a "dark tunnel" to test the munitions, operating heavy machinery, welding, electrical, and munitions manufacturing.