

Emaad Paracha

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EXPERIENCE

ABOUTXTREME | CLOUD SOLUTION ARCHITECT

October 2019 – Present | Chicago, USA (Remote)

- Building **Chatbots**, **Containers**, **Knowledge Mining**, **Computer Vision**, and other **AI applications** on **Microsoft Azure**
- Assisting in database and application migrations to **Microsoft Azure Cloud**
- Working with clients to determine requirements and to define the scope of a project
- Developing and maintaining an up-to-date knowledge specific to Microsoft products and services

UNIVERSITY OF TORONTO | MACHINE LEARNING RESEARCH ASSISTANT

May 2018 – January 2019 | Toronto, Canada

- Used machine learning to model planetary collisions and to predict outcomes and aid in understanding planet formation
- Worked with different Machine Learning libraries, such as **XGBoost** and **scikit-learn**, and utilizing other libraries such as **NumPy**, **Pandas**, **SciPy**, **Plotly**, etc. to assist in model creation, visualization, and analysis
- Worked on the research paper that was published in The Astrophysical Journal on 29 August 2019 - Paper available here: <https://iopscience.iop.org/article/10.3847/1538-4357/ab2bfb/>
- Presented weekly progress reports for the research supervisor

AIESEC CANADA | NATIONAL PROGRAM MANAGER

January 2017 – December 2017 | Toronto, Canada

- Responsible for planning, executing, and overseeing the first AIESEC Global Volunteer exchange programs in Canada and successfully started the first AIESEC volunteering projects in Edmonton, Calgary, and Toronto with local chapters
- Created marketing packages and financial models to plan and market the program to volunteer organizations
- Responsible for ensuring the programs go smoothly for both the volunteers and stakeholders in Edmonton and Toronto

DESIGN STORM IT CONSULTANCY | WEB DEVELOPER

June 2015 – July 2017 | London, UK (Remote)

- Developed and designed websites for Design Storm and clients of Design Storm using **HTML**, **CSS**, **JavaScript**, **PHP**, and **WordPress**, with clients ranging from property dealerships, cafes, and restaurants, to beauty parlors
- Provided technical support for the websites developed as well as **SEO** management
- Dealt with the corporate branding of Design Storm

EDUCATION

UNIVERSITY OF TORONTO | MASTER OF SCIENCE (MSc) - PHYSICS (SPECIALIZING IN ASTROPHYSICS)

September 2020 - Present | Toronto, Canada

UNIVERSITY OF TORONTO | HONOURS BACHELOR OF SCIENCE (WITH DISTINCTION) - ASTROPHYSICS, MATHEMATICS, AND ECONOMICS

September 2016 - April 2019 | Toronto, Canada

Courses: Machine Learning for Science, Coding Theory and Cryptography, Linear Algebra, Vector Calculus, Statistical Inference, Applied Probability, Partial Differential Equations, General Relativity, Quantum Physics, Differential Geometry, Complex Analysis, Astronomical Instrumentation, Combinatorics, Astrophysics, Classical Mechanics, Electromagnetism, Economics of Taxation, Law and Economics, Economic Development

Certifications: Azure Fundamentals (AZ900), Azure Administrator Associate (AZ103), Azure Developer Associate (AZ203)

PUBLICATIONS

[1] Valencia, D., **Paracha, E.**, Jackson, A. P. (2019). Can a Machine Learn the Outcome of Planetary Collisions? *The Astrophysical Journal*, 882(35). doi: <https://doi.org/10.3847/1538-4357/ab2bfb>

PROJECTS

USING MACHINE LEARNING TO MODEL PLANETARY COLLISIONS | MAY 2018 - JAN 2019

www.github.com/emaadparacha/ML-planetary-collisions

Used various machine learning clustering and regression algorithms to model planetary collisions. Given the masses, impact velocity, and impact angle, the model was used to predict the masses of the largest remnants.

CREATING A WI-FI CAMERA TO ANALYZE AN ENVIRONMENT IN THE WI-FI SPECTRUM | DEC 2013 - APR 2014

www.wifimagingcamera.com || www.github.com/emaadparacha/wificamera

A Wi-Fi Camera was built that allowed us to visualize the 2.4GHz frequency band of the electromagnetic spectrum into a 2D image that is similar in concept to X-Ray imaging.

SKILLS & COMPETENCIES

Technical Skills: Python, Machine Learning (XGBoost, scikit-learn, TensorFlow, PyTorch, CatBoost), Java, C++, Rust, C#, ASP.NET, Microsoft Azure, AWS, Google Cloud, Microsoft Excel (VBA, Macros, Pivot Tables), Kubernetes, Power BI, HTML, XML, CSS, PHP, SQL, JavaScript, WordPress, \LaTeX , Arduino, Wi-Fi Imaging, Xcode, Unity3D, Swift, SOLIDWORKS, Microsoft Word, Microsoft PowerPoint, Adobe PhotoShop, Adobe After Effects, Google Analytics, SEO

Languages: English, Urdu, Russian, Farsi/Persian, Pashto, Punjabi, Hindko, Tajik, Hindi