

## EDUCATION

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| <b>MS</b>   | Masters in Computer Science<br><i>Universität Rostock, Rostock, Germany</i>      | 2019 – 2021 |
| <b>BS</b>   | Bachelors in Computer Science<br><i>Bahria University, Karachi, Pakistan</i>     | 2014 – 2018 |
| <b>MPP</b>  | Microsoft Professional Program – Front End Development<br><i>Microsoft – EdX</i> | 2017 - 2018 |
| <b>DAFM</b> | Diploma in Advertising & Film Making<br><i>ARENA Multimedia</i>                  | 2016 - 2017 |

## WORK EXPERIENCE

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| <b>Master Thesis, Fraunhofer IGD</b>   | Feb 2021 – Jul 2021 |
| <ul style="list-style-type: none"> <li>Thesis: Bezier line object detection (detection of microscopic wood rings and transmission power-lines)</li> </ul>  |                     |
| <b>Research Assistant, Fraunhofer IGD</b>  | Feb 2020 – Feb 2021 |
| <ul style="list-style-type: none"> <li>Modeling feature visualization techniques to trace features learned in bat species recognition.</li> <li>Built the interface and APIs for the TensorRT inference engine from scratch using Vue.js.</li> </ul>   |                     |
| <b>Research Assistant, Max Planck Institute - DEMOGR</b>   | Jul 2020 – Mar 2021 |
| <ul style="list-style-type: none"> <li>Data collection (web scraping) for multiple projects totaling 10,000+ searches..</li> </ul>   |                     |
| <b>Werkstudent Software Engineer, HHLA – HPC</b>   | Sep 2019 – Nov 2019 |
| <ul style="list-style-type: none"> <li>Built and automated the pre-processing pipeline for the incoming raw dataset increasing the efficiency of pre-processing by decreasing time consumption by 98.33%.</li> <li>Devised ML models from scratch and improved the accuracy of container dwell time classification problem to 98%.</li> </ul>  |                     |
| <b>Freelance Software Engineer</b>   | Jul 2014 – Mar 2019 |
| <ul style="list-style-type: none"> <li>Completed 200+ small and big projects by myself.</li> <li>Co-founded 3 micro-startups (Axisport Lab, Graphimator &amp; Stitch-In)</li> <li>Skill stack ranges from web dev, app dev, designer, animator, content writing, and SEO.</li> <li>Clients: Cryptozilla.io*, Medb diagnostics**, Horizon Tech, Productivenous, Al Wahdat Travels, GiveAKidney, Midwestradar, Chotaay Delivery, UPenn, Flexicom, IFI, Individual entrepreneurs, and many more.</li> </ul> |                     |
| <b>*React Native Developer, CryptoZilla.io</b>   | Feb 2018 – Feb 2019 |
| <ul style="list-style-type: none"> <li>Developed a centralized and joint API system for the mobile application.</li> <li>Researched and developed tools to formulate data acquisition from more than 190 cryptocurrency exchanges.</li> <li>Devised various complex but optimized algorithms for computation and logic.</li> </ul>   |                     |
| <b>**Front End Engineer, MedB Diagnostics</b>  | May 2016 – Aug 2018 |
| <ul style="list-style-type: none"> <li>Implemented various E-commerce modules and features including Shipping, payment, front and back-office modules.</li> <li>Developed modern UI from scratch and optimized landing pages for mobile and search engines.</li> <li>Planned workflows, scenario analysis, and code review of several in-house projects.</li> </ul>  |                     |

## TECHNICAL SKILLS & KNOWLEDGE

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### **Machine Learning, Data Analysis & Computer Vision Frameworks**

Deep learning, Neural networks, Computer Vision, OpenCV, Python, Scikit-Learn, TensorFlow/Keras, Pytorch, Pandas, NumPy, SQL, Seaborn, Matplotlib, Jupyter Notebooks, Clarifai, MS Office, MS Excel, Google Analytics

### **Web / Mobile Application Frameworks**

HTML5, CSS3, BEM, LESS and SASS, Javascript ES5/6, React, Vue.js, Angular JS, Node.js, React Native, Android, Bootstrap, JSON, XML, SQL, jQuery, Jenkins, Progressive Web Applications, Automated Testing, Rest APIs, SOAP, Selenium, Mocha, Cross Browser Testing, Compatibility and Accessibility, Performance Optimization, Git, Linux

### **Cloud / Backend**

MySQL, NoSQL, GraphQL, MongoDB, AWS, Google Cloud Engine, Firebase

### **Others**

Adobe Suite (3 years exp): Adobe Photoshop, Adobe Illustrator, Adobe XD, CorelDraw, Premiere Pro, InDesign, After Effects, UI design, Advertisement design, Branding, Video Editing, Storyboarding, User experience, SEO, Content writing (3 years), etc.

## PUBLICATIONS

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- [Research Report: Situation Aware Assistance](#), private/unlisted, May 2019
- [Research Report: Augmented Reality in Altered Gravity](#), private/unlisted, April 2019