

# TAYYAB MUNIR

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## OBJECTIVE

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As an ambitious and motivated graduate with majors in Mechatronics engineering from Nust, I eagerly applied my theoretical knowledge and passion for innovation to secure a challenging role in the industry. With a solid foundation in programming and electronics, I possess strong technical and analytical skills, excelling both independently and as part of a team. Throughout my academic journey, I honed my proficiency in C++, Python, Javascript, web app development, and electronics design.

Now, as a Junior Software Engineer with a seven-month track record, I have seamlessly transitioned theoretical expertise into practical application. Specializing in Python development, workflow automation, and CAD model processing, I've demonstrated my ability to craft efficient, maintainable code while adhering to solid programming principles. My role involves enhancing existing codebases and implementing automation solutions to optimize workflow processes. Leveraging my expertise in Python, Bash, AWS, and Prefect workflows, I am committed to continual learning and growth as I navigate my career in the industry.

Looking forward, I am enthusiastic about pursuing my further master's studies to deepen my knowledge and contribute even more significantly to the rapidly evolving field of mechatronics and software engineering.

## EXPERIENCE

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### Junior Software Engineer

June 2023 - Present

Abyss Solutions

- Developed efficient and maintainable Python code, incorporating solid programming principles for improved software quality. Implemented regular expressions to extract tags from metadata of CAD models, enhancing data extraction accuracy.
- Enhanced and optimized existing codebase, leading to improved system performance and maintainability.
- Automated Prefect workflows using batch automation, reducing manual intervention and increasing overall efficiency.
- Managed post-processing tasks within Prefect workflows, ensuring seamless execution and data integrity.
- Designed, developed, and maintained command-line tools for various post-processing tasks in the pipeline.
- Utilized Google's Sheet API to automate structure extraction from CAD metadata, improving data organization.

## EDUCATION

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### Bachelor of Mechatronics Engineering

2018-2022

National University of Sciences and Technology (NUST) CEME

CGPA: 3.22

### Intermediate

2016-2018

Islamabad Model College for Boys, F-10/3, Islamabad

80%

### Matriculation

2014-2016

Islamabad Model College for Boys, F-10/3, Islamabad

90.95%

## SKILLS

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### Technical Skills

C++, Java, Python, Javascript, HTML, CSS, Mongodb, Expressjs, Node, Arduino, Reactjs, Bootstrap, Tailwind, Tkinter, qt5, Solidworks, Ltspice, Proteus, Matlab

### Soft Skills

Communication, Teamwork, Time management, Leadership, Conflict resolution, Creativity

## PROJECTS

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### Open Source Impedance Analyzer Using Raspberry pi

Final Year Project

- Created a GUI Software for AD5933 impedance Analyzer in python.
- Provided a low-cost solution to the highly expensive Impedance analyzers.
- Built equivalent circuit models for the unknown impedance.
- [View it here](#)

### Home Automation

- Built a server in nodejs that listens for local requests and communicates serially with Arduino to turn on lights.
- An alternative to expensive home automation devices
- [View it here](#)

### Fast Fourier Transform in making Low, High and Bandwidth Filters

- Fast Fourier Transform in making Low, High and Bandwidth Filters.

### Web Scraper

- Built a web scraper that scrapes for headlines on a news website like bbc.com or any other website.
- [View it here](#)

## RELATED COURSES

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### Fundamentals of Programming

Learned the Basics of programming variables, loops, controlled structured, functions and some simple algorithms

### Data Structures and OOP

Learned Advanced object oriented Programming concepts, data structures and made programs with OOAD techniques

### Electric Circuit Analysis

Learned basic circuit theory, nodal/mesh analysis, thevenin/norton theorem, and higher order circuit analysis

### Electronics Circuit and Devices

Learned the working principles of electronics components like diodes, bjt's, mosfets and made simple circuits

### Electronics Circuit Design

Learned how to design circuits and do circuit simulations

### Signals and Systems

Learned how signal processing is done in computers

### Instrumentation and Measurement

Learned analog to digital conversion and vice-versa