

Adithya Biji

17 De Jong St, Scarborough ON M1P 0C1

437-255-7626

adithyabiji1998@gmail.com

<https://www.linkedin.com/in/adithya-b-744176107>

LAB TECHNOLOGIST AND RESEARCH ASSISTANT – AEROSPACE CONTROL SYSTEMS

FANUC CERTIFIED ROBOT AND PLC PROGRAMMER | PROJECT COMMISSIONER | STUDENT
RESEARCHER | BIG DATA ENGINEER

SUMMARY OF QUALIFICATIONS

- Currently pursuing co-op at Centennial College as lab technologist and research assistant in the fields of aerospace control systems, automation and robotics.
- In process of publishing research findings in IEEE Digital Library based on the comparison of next generation control systems using Microprocessor and MATLAB Simulink with machine learning algorithms over PLC – PID feedback system.
- Proficient in robotics programming, designing, and calibrating software for industrial robots, including FANUC, ABB, KUKA and Universal.
- Proficient in PLC ladder programming using Siemens TIA, Allen Bradley CompactLogix and OMRON systems, design electrical wiring diagrams and fabrication of complete application-based control panel.
- Experience in configuring Universal Robot UR10 Euromap protocol with Husky Injection Molding Machine and developing level 4 electrical safety circuit as per Canadian Occupational Health and Safety (CCOHS) regulations.
- Volunteered as Judge representing Centennial College for Toronto Fluid Power 2024 Challenge organized by Canadian Fluid Power Association.
- FANUC certified in tool handling procedures, MEP course certified in HVAC duct designing and proficient in electrical drawings and reading blueprints.

EDUCATION

Electro-Mechanical Engineering Technology – Automation and Robotics

Jan. 2023 - Present

Centennial College, Toronto, ON

Expected graduation: April 2025

- *GPA: 4.0 / 4.5*

Bachelors of Technology (with Honors) – Mechanical Engineering

Aug. 2016 – September 2020

TKM College of Engineering, Kerala, India

Grade: First Class with Distinction

PROJECT WORKS

- **Research: Comparison of Next Generation Aerospace Control Systems using Microprocessor and MATLAB Simulink with Machine Learning Algorithms over PLC – PID Feedback System**

Centennial College, North York, Ontario

Sept. 2024 – Present

Technology used: Siemens TIA, Rockwell Automation Studio 5000 (AB CompactLogix), AutoCAD, Solidworks

- **Fabrication of Electrohydraulic Stations for Electronics/Electrical Micro Credential Course**

Centennial College - Canadian Fluid Power Association, Toronto, Ontario

August. 2024 – Oct. 2024

Skills used: Bosch IndraworksDS, Siemens TIA, Rockwell Automation Studio 5000 (AB CompactLogix), HMI, SCADA, CNC Machining, Solidworks, AutoCAD, Ultimaker, Microsoft Office Suite and Hand Tools

Designed and fabricated 3 IAC Bosch Rexroth Servo valves with first of a kind customizable and portable multi PLC control system in for the micro credential program development in association with Canadian Fluid Power Association.

- **Fabrication of Pneumatic Stations for Advanced Pneumatic Micro Credential Course**

Centennial College - Canadian Fluid Power Association, Toronto, Ontario

June. 2024 – August. 2024

Skills used: CNC Machining, Aurdino, Solidworks, AutoCAD, Ultimaker, Microsoft Office Suite and Hand Tools and Pneumatic circuits

Designed and fabricated 49 hydraulic and pneumatic stations in less than two months within a budget range of \$6000 against proposed budget of \$20000 in less than two months for the micro credential program development in association with Canadian Fluid Power Association.

- **Level 4 Safety Circuit Panel and Fencing Development as per Canadian Electrical Safety Regulations**

Centennial College, Toronto, Ontario

June. 2024 – July 2024

Skills used: Banner Safety PLC ladder programming, Universal Robots, Husky Injection Molding, Blueprints

Designed and configured Banner safety PLC Panel and Universal Robot UR10 Euromap protocol with Husky Injection Molding Machine and developing level 4 electrical safety circuit as per Canadian Occupational Health and Safety (CCOHS) regulations.

WORK EXPERIENCE

Laboratory Technologist – Research Assistant – Aerospace Control Systems (Full Time)

Centennial College, North York, Ontario, Canada

September 2024 – Present

Currently researching on how to improve Aerospace Control Systems using Artificial Intelligence and Machine Learning algorithms for more precise control through innovative feedback control applications.

Skills: Proportional Integral Derivative (PID), Simulink, MATLAB, Feedback Control Systems, Model Predictive Control, Arduino, Allen Bradley CompactLogix 5000 and Siemens TIA.

Laboratory Technologist – Robotics & Automation (Full Time)

Centennial College, Toronto, Ontario, Canada

January 2024 to September 2024

- Lab in- charge of Robot/PLC Lab which consists of ABB, FANUC, Universal Robots and Automation cell with Allen Bradley PLC (SLC 500, 5000), Allen Bradley operator screen (PANEL VIEW 550) Omron C200H PLC and pneumatic systems.
- Technical expertise in creating electrical safety circuit drawings and developing safety panel for interconnection of Husky Injection Molding Machine (IMM) and Ure10 Robot.

Skills: RSLogix500, Husky Injection Molding Machine, ABB Robot Studio, MATLAB, Rockwell Studio 5000, Fanuc Robots, RoboGuide, CX-Programmer, Hydraulic Systems, Electro-pneumatics, ABB Robot Welding.

Laboratory Assistant – Machine Shop (Part-time)

Centennial College, Toronto, Ontario, Canada

May 2023 to August 2023

- Handling Inventory management and reporting broken tools to Authorities.
- Replacing bandsaw blades, welding, planning workspace and grinding drill bits.
- Responsible for handling out tools and making parts as per specifications upon request.
- Assisting final YEAR students with their projects and provide recommendations for improvements.

Big Data Engineer – IT Automation and Production Support

TATA Consultancy Services, India

April 2021 to July 2022

Domain: Nielsen – Parent (Nielsen Media, USA)

- Experienced in using SparkSQL in spark-shell for data extraction, transmission, and analysis from multiple file formats to discover insights from user data before and after computation.
- Designed, developed and monitored DAG jobs for data computation using task automation tools like Airflow.
- Performed Code Analysis (Java, Scala, Python, HTML) to rectify and resolve data processing failures in production.

Skills: Hive, Hadoop – Jenkins, Data Analysis, Python, PostgreSQL, Apache Airflow, MySQL, Scala, Microsoft Excel,

References

Name: Anfneq Ma (Co-op Lab Supervisor and Technologist)

Contact no.: provided upon request | **Email:** ama@centennialcollege.ca

Name: Jason Lee P.Eng (Professor, Advanced Pneumatic & Hydraulic Course PI)

Contact no.: provided upon request | **Email:** jasonlee@centennialcollege.ca

Certified Education Training

Certificate of Completion: CERT Level I

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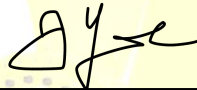
Adithya Biji

For successfully completing

Centennial College

FANUC CERT Handling Tool Operations and Programming

Under the certification of

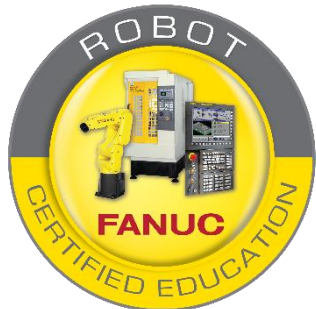


Jason Lee

FANUC Certified CERT Instructor

and in recognition thereof is awarded this certificate on

September 4, 2024



**CENTENNIAL
COLLEGE**