europass Curriculum Vitae

PERSONAL INFORMATION

Thushar Tom

Athirampuzha, Kottayam, Kerala, 686562, India
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Sex Male | Date of birth 21/03/1998 | Nationality Indian

Enthusiastic about robotics, machine learning, and aerial vehicles

WORK EXPERIENCE

1 August 2020 – Present

Software Engineer

Founding Minds Software, Infopark, Kochi, Kerala, India

Python developer working with machine learning object detection for vision-based electronics

- **US Patent** filed for software for golf ball tracking and scoring system
- Designed, prototyped, and developed the body and logic of a vision-based machine to sort golf based on colour using a Jetson nano
- Trained, and integrated deep learning models
- Built automated data pipelines for computer vision applications
- Created AWS cloud-based ML automation pipelines, Airflow, and MLFlow with Nginx
- Developed software products using Flutter, PyQt5, Flask

Business or sector Software Company

Jan 2020 – June 2020

Hardware Engineering Intern

Kepler Robotics, Kottayam, Kerala, India

Prototyped and developed hardware solutions for small-scale custom applications

- Experienced in protocols such as UART, SPI, I2C, USB and hardware tools
- Developed electronic hardware solutions on various developer boards such as ESP32, NodeMCU, Raspberry Pi 4, pi zero, Arduino (nano, uno, mega), and jetson nano.
- 3D printed and modelled different products and casings
- IOT using MQTT and robotics projects implemented using various sensors and actuators

Business or sector Start-up

EDUCATION AND TRAINING

March 2016- December 2020

B. Tech. in Electronics and Communication Engineering, GPA - 7.44

2.5 German marking

University - College of Engineering Chengannur, India

- B.Tech. Major thesis – developed ML model using Keras for handwritten character recognition
- Elected technical coordinator for college senate (2019-2020)
- Entrepreneurship development club chairman (2018-2020)
- IEEE Robotics and Automation Society (RAS) Secretary (2019-2020)
- IEEE Special Interest Group for Humanitarian Technologies (SIGHT) Coordinator (2018-2019)
- Fabrication lab coordinator (2017-2020)
- Student representative of the batch (2019-2020)
- Co-founded Robocom (a robotics community)
- Received start-up funding for project Sight-(audio aid for the visually impaired)

March 2015- March 2016

Higher Secondary (12th Grade)

Physics, Mathematics, and Computer Science percentage – 84%

Institute – Bhavans Vidya Mandir, Pottore, Thrissur, India

Mother tongue Malayalam

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
German	A1	A1	A1	A1	A1
	Goethe A1 Certificate				
English	C2	B2	C2	C2	B1
	IELTS band 7				

Communication skills

- Experienced in hosting technical workshops
- Attended national level conferences
- Presented at seminars and workshops

Organisational / managerial skills

- Leadership - Chief coordinator hosting a national level IEEE hackathon ROBOTHON 5.0 (2019)
- Initiatives -
  - Co-founded Robocom (college club)
  - hosted events, exhibitions
  - Set up menstrual pad vending machine
  - Built and distributed power banks using Kerala flood relief
- Mentoring - IEEE student quality improvement program (ISQIP 2019)
  - 3-day hands-on workshop on embedded systems development for 50+ students
- Management - Managed 30+ students for Tronix (2018) and acquired 15+ sponsors
- Volunteering - facilitated IEEE PES, RAS, WIE, and SIGHT events

Skills acquired from Coursework

- Motivated self-learner who enjoys learning by solving real-world problems
- Performed best in class laboratories as part of the undergraduate program
- Completed Massive Open Online Course (MOOC) on Design for IoT, Deep Learning, and Deep learning for computer vision on NPTEL platform
- Coursera certifications - Mathematical thinking for computer science, version control using Git
- Undergraduate thesis on ML model for recognising handwritten receipts

Technical skills

- Programming: Python, C++, Dart, Bash
- Web Technologies: HTML, CSS, Django, Flask, MySQL, DynamoDB, JSON, Apache, nginx, AWS
- Machine Learning: concepts, annotation, data pipelines, TensorFlow, Yolo
- Misc. technologies: PyQt5, Git, Flutter
- Hardware: Developer boards (pi, jetson, Arduino), 3D modelling, 3D printing, laser cutting, vinyl plotter, PCB designing, etching, soldering,
  - sensors - flow meter, temperature, motion, gyro, light, moisture, IP camera, Pi cam, etc
  - actuators - solenoid valve, motors, servos, stepper, relays
- Tools: Pycharm, VScode, Arduino IDE, Android studio, Adobe suite, Fusion 360, Eagle, PuTTY, Inkscape, Qt designer, Github

Other skills

- Photography (acquired through passion and practice)
- Ukulele (self-learned during lockdown)

Patent

- Ball tracking system identifying objects by colour (06/08/2021) Patent no - 63208029

Projects

- SIGHT - A wearable device providing audio aid to the visually impaired. Powered by ML (Yolov3 object detection) on Raspberry Pi. Funded by Kerala State Start-up mission
- Built aerial vehicles – Quadcopter using DJI Naza m-lite & RC aircraft
- Router backup (battery charge-discharge cycles plotted and analysed using Arduino and python)

Conferences

- National summit on SDGs & best practices for technical events, T Summit, SRM Chennai, India

Memberships

- IEEE (2016-2020)

Honours and awards

- 1St Prize in Shristi 2019 for Best Robotics Project Award - National Level Event
- 3rd Prize in ROBOTHON 4.0, National event by IEEE RAS SB CEC, MAR 2018
- 1St Prize in Resilience, conducted by IEEE WIE, FEB 2018

References

- Dr Jacob Thomas V, Former Principal, College of Engineering Chengannur, principal@mec.ac.in
- Anish Chandran, Director of Product Innovation, Founding Minds Software, anish.chandran@foundingminds.com