Aravinth Panch

1 Personal Data

NAME:	Aravinth Panch
PLACE AND DATE OF BIRTH:	Sri Lanka | 06 May 1987
ADDRESS:	Bornstr. 3, 12163 Berlin, Germany
PHONE:	+49 176 31173663
EMAIL:	me@aravinth.info
CV UPDATED ON:	14th June 2020

2 Work Experience

APR 2020 JUN 2019	Co-Founder | Chief Technology Officer *Watergenics UG, Berlin, Germany*
JUN 2019 AUG 2017	Head Of Embedded Systems Engineering *Next Big Thing AG, Berlin, Germany*
JUL 2017 APR 2016	Lead Embedded Systems Engineer *Senic GmbH, Berlin, Germany*
MAR 2016 OCT 2015	Co-Founder | Chief Technology Officer *Macsxperts, Bangalore, India*
SEP 2015 AUG 2015	Embedded Systems Engineer *SmartB Energy Management GmbH, Berlin, Germany*
MAY 2015 OCT 2014	Systems Architect *The Jodel Venture GmbH, Berlin, Germany*
SEP 2014 JAN 2013	Embedded Systems Engineer *Yetu AG, Berlin, Germany*
JUL 2011 APR 2011	Senior Software Engineer *Infosys LTD, Mysore, India Systems Engineer*
MAR 2011 NOV 2009	Co-Founder | Chief Technology Officer *Academia Grandiosa Medicinae, New Delhi, India*
OCT 2009 OCT 2008	Systems Engineer *Tata Consultancy Services LTD, New Delhi, India*

3 Education

3.1 Academics

2015 2011	Master of Science in Electrical Engineering *Technical University of Berlin, Berlin, Germany*
2008 2004	Bachelor of Technology in Electronics and Communication Engineering *SRM University, Chennai, India*
2004 2003	Associate's Degree in Multimedia *ARENA Multimedia, Chennai, India*

3.2 Research

2015 2014	Humanoid Robotics *DAI LABOR - Distributed Artificial Intelligence Laboratory, Berlin, Germany*
2014	Biometrics and Deep Security *T-LABS - Deutsche Telekom Innovation Laboratories, Berlin, Germany*
2014 2013	Autonomous Vehicle *DCAITI - Daimler Center For Automotive Information Technology Innovations, Berlin, Germany*
2013	Wireless Mesh Technologies *TKN - Telecommunication Networks Group, Berlin, Germany*

3.3 Certifications and Test Scores

2012	TestDAF - Test of German as Foreign Language. *Score: 16/20*
2010	IELTS - International English Language Testing System. *Score: 7.5/9*
2010	EC-Council - Ethical Hacking
2009	CCNA - Cisco Certified Networking Administration

4 Projects

List of freelancing projects for private clients, academic research projects, new media art projects, Hackathon challenge and personal projects.

2016	**Swan Lake Music Art**, *Private, Berlin, Germany*
	Swan Lake Music Art is a project of electronics and firmware to provide monotonic music for a multilayer painting about Russian Ballet which is painted by a fine artist who has been working on the project to exhibit the beauty of Ballet dance. Since the painting is on thinner canvas, the form factor of electronic should be thinner and smaller.
	Technology: Tchaikovsky SwanLake Music, Attiny85, Monotone, AVR, Kicad, Arduino ISP, Piezo, Musescore, Midi, PWM, 440Hz
Link	https://github.com/AravinthPanch/swan-lake-music-art

2015	**Gesture Recognition for Human-Robot Interaction: An approach based on skeletal points tracking using depth camera**, *Master Thesis, Distributed Artificial Intelligence Lab, Berlin, Germany*
	Gesture Recognition For Human-Robot Interaction with modelling, training, analysing and recognising gestures based on computer vision and machine learning techniques.
	Technology: HRI, Aldebaran NAO, Humanoid Robot, Depth Camera, AsusXtion, OpenNI2, NiTE2, Boost, UDP, WebSocket, ThreeJS, Matlab, C++, Javascript, Python, Gesture Recognition Toolkit, Adaptive Naive Bayes Classifier, Machine Learning, Robotics, 3D printing
Link	https://github.com/AravinthPanch/gesture-recognition-for-human-robot-interaction

2015	**Heart of The City**, *New Media Art Installation for VIVID Light Festival 2015, Sydney, Australia*
	The Heart of the City is an interactive public art sculpture that pulses light according to the heart beat of the people. The sculpture invites several people to sit and interactive with it.
	Technology: Heartbeat sensing, Pulse Oximeter, Arduino, LED Neon Flex, Circuit Design, Power MOSFET STP16NF06L
Link	http://www.anaisafranco.com/heartofthecity, https://github.com/AravinthPanch/heart-of-the-city

2014	**Smart Green House**, *Research, Telecommunication Networks Group, TU Berlin, Germany*
	Smart Green House is a scalable plant monitoring system that helps us to monitor our plants and water them automatically.
	Technology: IEEE.802.15.4, WaspMote, XBee, Light Sensor TSL2561, Moisture Sensor Temperature-Humidity Sensor DHT11, NodeJS
Link	https://github.com/AravinthPanch/smart-green-house

2013	**RSSI based Indoor localization and Raw Ranging Data Visualization**, *Research, Telecommunication Networks Group, TU Berlin, Germany*
	Indoor localisation using RSSI. RSSI is received signal strength indicator in IEEE 802.11 beacon packet and beacon packets are transmitted periodically to announce the presence of WiFi.
	Technology: IEEE.802.11, Beacon Packet, RSSI, NodeJS, D3JS, Matlab, TWIST Testbed, Signal Jammer, WiSpy Spectrum Analyzer, Turtlebot, ROS, Javascript, Python
Link	https://github.com/AravinthPanch/rssi

2008	**GSM Cell Phone controlled Two Axes Robot with artificial intelligence for the detection of Fire, Temperature and Metal**, *Bachelor Thesis, SRM University, Chennai, India*
	The objective is to control a Robot over a long terrestrial distance by using GSM Network instead of using other communication technologies which have shorter range.
	Technology: Two axis Robot, GSM cell phones with DTMF, DTMF receiver – UM92870, Sensors to detect temperature, fire and metal (IR LED, LDR, NTC), Micro Controller – 89c51, Buzzer

2014	**Stereo Acoustic Light Emitter**, *Hackathon Challenge, Science Hackday Berlin 2014*, **Best Data Hack Award**
	It is an audio-visual system that makes use of spectral Tube and sensors to create a feedback system.
	Technology: spectral tube, OSC, MIDI synthesizer, Arduino, proximity sensor, infrared sensor, touch sensor, microphone, circuit board
Link	https://github.com/AravinthPanch/stereo-acoustic-light-emitter

2014	**Confusion**, *New Media Art Installation, Creative Code Jam, Berlin, Germany*
	Confusion is an emotional sculpture in the form of a head with two faces that talks with the spectator when someone touches it.
	Technology: Acrylic, Laser cutting, Plasma ball with Tesla coil, Current sensor, Arduino, MP3 shield, speakers
Link	https://github.com/AravinthPanch/confusion-sensitive-sculpture, http://www.anaisafranco.com/confusion

2014	**Home DNS**, *Personal, Internet of Things*

Home DNS is simple tool that will allow us to access our home LAN over internet.

Technology: NodeJS, RaspberryPi, Cloud, Port forwarding

Link | https://github.com/AravinthPanch/home-dns

2014 | **Yetu CAM**, *Research, Yetu AG, Berlin, Germany*

Yetu CAM is a simple telepresence robot. A telepresence robot is a remote-controlled, wheeled device with a display to enable video chat and videoconferencing, among other purposes.

Technology: Arduino Yun, 360 deg Servo Motor, MDF Laser Cut

Link | https://github.com/AravinthPanch/yetu-cam

2013 | **StreeMuFi**, *Hackathon Challenge, Hack4Good, Berlin, Germany*, **Winner**

Street Music Finder (StreeMuFi) is a project to help street musicians earn a living with their music. Here you can search for street musicians and ask them to play a gig at your event.

Technology: PHP, Android, NodeJS, MySQL, GeekList

Link | https://github.com/AravinthPanch/streemufi

2013 | **Autonomous Vehicle**, *Research, Daimler Center for Automotive Information Technology Innovations (DCAITI), Berlin, Germany*

Vehicle-to-Vehicle Communication for autonomous vehicle to support Cooperative Adaptive Cruise Control (CACC) and Media Prefetching.

Technology: Java, VSimRTI Simulation, Mercedes Benz, v2v, v2x

2014 | **Academics-LMU**, *Freelance, Liaoning Medical University, Liaoning, China*

E-Learning web application for medical students to attend various test series.

Technology: Wordpress, WPLMS, PHP, My SQL

Link | http://academics-lmu.com

2013 | **Shanti CRM**, *Freelance, Bevermann Telesalesfactory, Berlin, Germany*

Customized CRM based on Microsoft Dynamics CRM to manage marketing campagne.

Technology: Microsoft Dynamics CRM, SIP, Visual Studio, WPF, MVVM, Javascript

2007 | **Steganography**, *Freelance, SRM University, Chennai, India*

Steganography is the art or practice of concealing a file, message, image, or video within another file, message, image, or video.

Technology: Visual Basic, Image Processing, RGB

Link | https://github.com/AravinthPanch/steganography

2003 | **Interactive Anatomy**, *Freelance, Moscow Medical Academy, Moscow, Russia*

Interactive application for medical students to learn anatomy of human body.

Technology: Flash, Sound Forge, Photoshop

5 Award

2011 | Erasmus Mundus Scholarship for outstanding students from Third-Countries to pursue higher education in Europe

6   Languages

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TAMIL:	Native proficiency
ENGLISH:	Bilingual proficiency
GERMAN:	Full professional proficiency
HINDI & URDU & MALAYALAM:	Limited working proficiency
RUSSIAN:	Elementary proficiency

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7   Skills

Programming languages:	C, C++, C#, Java, Javascript, Python, MATLAB, Unix Shell Script
Frameworks/Library:	.Net, WPF, Silverlight, Boost, NodeJS, BackboneJS, ReactJS, MochaJS, CSS, HTML, WebGL, Arduino, Processing, OpenCV
Database/Cache:	MS SQL, My SQL, Postgres, MongoDB, Redis Cache
IDE:	Vim, Visual Studio, Xcode, Eclipse, uVision, WebStorm, PyCharm
OS:	Embedded Linux, Linux, Android, OSX, Windows
Communication Protocol:	Z-Wave, ZigBee, IEEE 802.15.4, I2C, SPI, Bluetooth, DALI, KNX, CAN
DevOp :	Ansible, Chef, ElasticSearch, Logstash, Kibana
Robotics:	AI, Machine Learning, Computer Vision, ROS, Aldebaran NAO
Electronics:	Semiconductors, Microcontrollers, Circuit Design, PCB design, PCB Etching, Digital and Analog sensors, Automation & Control Systems, Signal Processing
Fabrication:	3D printing, Sheet Metal fabrication, Laser Cutting, Welding, CNC Milling, Vinyl Cutting, Plotting
Media:	2D Animation, Flash, Photoshop, Illustrator, 3D modeling, Fusion 360, Sketch Up

8   Interests and Activities

Research & Development, Open Source, Programming, Electronics, Robotics, Artificial Intelligence, Bionics, UAV, Machine Learning, Statistics, Data Visualization, Algorithms, Computer Vision, Image Processing, Internet Of Things, Wireless Technologies, Deep Security, Computer Networks, Physics, Mathematics, Quantum Mechanics, Creative Coding, Art, Painting, Graphic Design, Animation, 3D, Archery, Martial Arts, Agriculture, Sustainability, Languages, History, Making & Fabrication,

9   Contribution

MENTOR	**SINGA Deutschland**
	Volunteering to help qualified Refugees to get a place in German Job market by mentoring on Technical and Soft skills.
Link	http://singa-deutschland.com
FOUNDING MEMBER	**Sustainability Drinks Berlin**
	It is a series of regular get-together to promote an active sustainability movement in Berlin to create an awareness about the environment, energey conservation, health and hygiene.
Link	http://sustainabilitydrinks.de

ORGANIZING TEAM	**Science Hackday Berlin**
	Science Hackday brings together designers, developers, scientists and other geeks in the same physical space for a brief but intense period of collaboration, hacking, and building 'cool stuff'.
Link	http://berlin.sciencehackday.org
TEAM MEMBER	**DAInamite Humanoid Robot Team, Robocup Standard Platform League**
	RoboCup is an international scientific initiative with the goal to advance the state of the art of intelligent robots.
Link	http://www.dainamite.de

Cover Letter

Aravinth is an interdisciplinary expert with 17+ years of global experience in science, engineering, arts and sustainability, with the core expertise in research, development and production of electro-mechanical embedded systems and digital products.

As an entrepreneur, he co-founded 7 organisations in the sector of education, sustainability, agriculture, consulting & engineering services, in Asia & Europe.

As an engineer, he worked for 2 corporates in the telecom sector and worked for 8 tech startups in the sector of education, smart home, media, agriculture, energy, healthcare & water, in Asia & Europe.

As an educator, he trained several young innovators and mentored 120+ deep tech startups in the domain of advanced materials, healthcare, agriculture, aerospace, energy, automotive & biotechnology, globally.

As a scientist, he researched at 4 academic research institutions in the field of wireless technologies, autonomous vehicles, biometrics, humanoid robotics & machine learning, in Germany.

As an advisor, he supported several individuals, startups, accelerators, incubators, innovation hubs, corporates, investors, manufacturers, research institutions, universities, government initiatives, art galleries and social enterprises, globally.

As an artist, he has co-created several new media art installations for temporary and permanent exhibitions, which attracted more than 1.5 million visitors, in Germany, Australia & USA.

As a community builder, he co-created and has been curating several communities for startups, sustainability, education & art, in Asia, Europe & Africa.

More info at www.aravinth.info