

# Aravinth

## 1 Personal Data

FULL NAME: Sivalingam Panchadcharam Aravinth  
PLACE AND DATE OF BIRTH: Sri Lanka | 06 May 1987  
ADDRESS: Sparrstr.9, 13353 Berlin, Germany  
PHONE: +49 176 31173663  
EMAIL: [me@aravinth.info](mailto:me@aravinth.info)

## 2 Work Experience

Current OCT 2014	<b>The Jodel Venture GmbH, Berlin, Germany</b> <i>Senior Software Engineer</i> Development of Backend and Frontend web application, DevOperation, Data Analysis using <i>Javascript, NodeJS, MongoDB, Redis Cache, Mongo Cluster, ReactJS, Bootstrap, HTML, CSS, Amazon AWS, Ansible, ElasticSearch, Logstash, Kibana, New Relic</i>
SEP 2014 JAN 2013	<b>Yetu AG, Berlin, Germany</b> <i>Software and Hardware Engineer</i> Development of Cloud infrastructure and SmartHome Gateway hardware for Internet of Things using <i>Z-Wave, OpenHAB, Smart Sensors, Freescale SBC, ARM, RaspberryPi, Smart Metering, Device Recognition Machine Learning Algorithm, Javascript, NodeJS, BackboneJS, MochaJS, Java</i>
JUL 2011 APR 2011	<b>Infosys Ltd, Mysore, India</b> <i>Senior Software Engineer</i> Development of Vesels & Tanks management software, Data Analysis for British Petroleum - Alaska using <i>C#, .Net, WPF, Silverlight, Microsoft SQL, Sharepoint, Windows IIS, Visual Studio</i>
MAR 2011 NOV 2009	<b>Academia Grandiosa Medicinae, New Delhi, India</b> <i>Software Engineer</i> Development of Interactive E-Learning application using <i>C#, C++, ASP.Net, MS SQL, HTML, CSS, Javascript, Windows IIS, Visual Studio</i>
OCT 2009 OCT 2008	<b>Tata Consultancy Services, Hyderabad, New Delhi, India</b> <i>Asst. Software Engineer</i> Development of Call Data Records System for BSNL Telecom using <i>C#, C++, ASP.Net, Windows IIS, Visual Studio</i>

## 3 Education

2015	<b>Master of Science in ELECTRICAL ENGINEERING, Technical University of Berlin</b> <b>Major :</b> Electronics, Wireless Technologies, Artificial Intelligence, Robotics, Machine Learning <b>Thesis :</b> Gesture Recognition for Human-Robot Interaction: An approach based on skeletal points tracking using depth camera
------	---

- 2008 | Bachelor of Technology in ELECTRONICS AND COMMUNICATION ENGINEERING, **SRM University**, Chennai, India  
**Courses** : Electronics, Analog & Digital Communication Technologies, Microcontrollers, Electrical Networks, Circuit Theory, Electromagnetic Field Theory, Signal Processing, Image Processing, Integrated Circuits, Control Systems, VLSI, Embedded Systems  
**Thesis** : GSM Cell Phone controlled Two Axes Robot with artificial intelligence for the detection of Fire, Temperature and Metal
- 2003 | Specialization in Graphics and Animation, **ARENA Multimedia**, Chennai, India  
**Courses** : Graphic design, Web design, Illustration, Animation, Sound & Video Editing using *Photoshop*, *HTML*, *CSS*, *Dreamviewer*, *illustrator*, *Flash*, *3ds Max*, *Sound Forge*, *After FX*

## 4 Projects

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

- 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*  
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**: 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/AravindhPanch/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/AravindhPanch/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/AravindhPanch/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/AravindhPanch/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	<p><b>Stereo Acoustic Light Emitter, Hackathon Challenge, Science Hackday Berlin 2014, Best Data Hack Award</b></p> <p>It is an audio-visual system that makes use of spectral Tube and sensors to create a feedback system.</p> <p><b>Technology:</b> spectral tube, OSC, MIDI synthesizer, Arduino, proximity sensor, infrared sensor, touch sensor, microphone, circuit board</p> <p>Link <a href="https://github.com/AravindhPanch/stereo-acoustic-light-emitter">https://github.com/AravindhPanch/stereo-acoustic-light-emitter</a></p>
2014	<p><b>Confusion, New Media Art Installation, Creative Code Jam, Berlin, Germany</b></p> <p>Confusion is an emotional sculpture in the form of a head with two faces that talks with the spectator when someone touches it.</p> <p><b>Technology:</b> Acrylic, Laser cutting, Plasma ball with Tesla coil, Current sensor, Arduino, MP3 shield, speakers</p> <p>Link <a href="https://github.com/AravindhPanch/confusion-sensitive-sculpture">https://github.com/AravindhPanch/confusion-sensitive-sculpture</a>, <a href="http://www.anaisafranco.com/confusion">http://www.anaisafranco.com/confusion</a></p>
2014	<p><b>Home DNS, Personal, Internet of Things</b></p> <p>Home DNS is simple tool that will allow us to access our home LAN over internet.</p> <p><b>Technology:</b> NodeJS, RaspberryPi, Cloud, Port forwarding</p> <p>Link <a href="https://github.com/AravindhPanch/home-dns">https://github.com/AravindhPanch/home-dns</a></p>
2014	<p><b>Yetu CAM, Research, Yetu AG, Berlin, Germany</b></p> <p>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.</p> <p><b>Technology:</b> Arduino Yun, 360 deg Servo Motor, MDF Laser Cut</p> <p>Link <a href="https://github.com/AravindhPanch/yetu-cam">https://github.com/AravindhPanch/yetu-cam</a></p>
2014	<p><b>Academics-LMU, Freelance, Liaoning Medical University, Liaoning, China</b></p> <p>E-Learning web application for medical students to attend various test series.</p> <p><b>Technology:</b> Wordpress, WPLMS, PHP, My SQL</p> <p>Link <a href="http://academics-lmu.com">http://academics-lmu.com</a></p>
2013	<p><b>StreeMuFi, Hackathon Challenge, Hack4Good, Berlin, Germany, Winner</b></p> <p>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.</p> <p><b>Technology:</b> PHP, Android, NodeJS, MySQL, GeekList</p> <p>Link <a href="https://github.com/AravindhPanch/streemufi">https://github.com/AravindhPanch/streemufi</a></p>
2013	<p><b>Autonomous Vehicle, Research, Daimler Center for Automotive Information Technology Innovations (DCAITI), Berlin, Germany</b></p> <p>Vehicle-to-Vehicle Communication for autonomous vehicle to support Cooperative Adaptive Cruise Control (CACC) and Media Prefetching.</p> <p><b>Technology:</b> Java, VSimRTI Simulation, Mercedes Benz, v2v, v2x</p>
2013	<p><b>Shanti CRM, Freelance, Bevermann Telesalesfactory, Berlin, Germany</b></p> <p>Customized CRM based on Microsoft Dynamics CRM to manage marketing campaign.</p> <p><b>Technology:</b> Microsoft Dynamics CRM, SIP, Visual Studio, WPF, MVVM, Javascript</p>
2007	<p><b>Steganography, Freelance, SRM University, Chennai, India</b></p> <p>Steganography is the art or practice of concealing a file, message, image, or video within another file, message, image, or video.</p> <p><b>Technology:</b> Visual Basic, Image Processing, RGB</p> <p>Link <a href="https://github.com/AravindhPanch/steganography">https://github.com/AravindhPanch/steganography</a></p>
2003	<p><b>Interactive Anatomy, Freelance, Moscow Medical Academy, Moscow, Russia</b></p> <p>Interactive application for medical students to learn anatomy of human body.</p>

Technology: Flash, Sound Forge, Photoshop

## 5 Certifications and Test Scores

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

## 6 Award

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

## 7 Languages

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

## 8 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, WebStorm, PyCharm  
OS: Embedded Tiny OS, Linux, Android, OSX, Windows  
Communication Protocol: Z-Wave, ZigBee, IEEE 802.15.4, I2C, Bluetooth  
DevOp & Monitoring: Ansible, Chef, Elasticsearch, Logstash, Kibana  
Robotics: AI, Machine Learning, Computer Vision, ROS, Aldebaran NAO  
Electronics: Semiconductors, Microcontrollers, Circuit Design, Electrical Network Synthesis, PCB design, Digital and Analog sensors, Automation & Control Systems, Signal Processing  
Fabrication: 3D printing, Laser Cutting, Wood working, Welding  
Media: 2D Animation, Flash, Photoshop, Illustrator, 3D modeling, Blender, Sketch Up

## 9 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,

## 10 Contribution

FOUNDING MEMBER	<b>Sustainability Drinks Berlin</b> It is a series of regular get-together to promote an active sustainability movement in Berlin to create an awareness about the environment, energy conservation, health and hygiene. Link <a href="http://sustainabilitydrinks.de">http://sustainabilitydrinks.de</a>
TEAM MEMBER	<b>DAInamite Humanoid Robot Team, Robocup Standard Platform League</b> RoboCup is an international scientific initiative with the goal to advance the state of the art of intelligent robots. Link <a href="http://www.dainamite.de/en">http://www.dainamite.de/en</a>