

Chirath R

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Education

- 2014–2018 **Bachelors in Computer Science and Engineering**, Amrita School of Engineering, **CGPA: 9.12/10**.
2012–2014 **All India Senior School Certificate Examination**, Vijaya Matha Public School, [Secured: **88.8%**].
2002–2012 **All India Secondary School Examination**, Vijaya Matha Public School, [GPA: **9.8/10**].

Projects

- August 2018 **JioFiDash**, A dashboard to control JioFi router.
- Developed an application that shows battery status, network speeds, data usage and connected devices.
 - Reverse engineered the API and created background tasks to fetch data and show notifications.
 - Learned to make POST and GET requests with custom HTTP headers off the UI threads using AsyncTask.
 - Learned to develop, test and deploy applications on the Google Play store.
- Technologies used:** Android, Jsoup, Volley, Material Design Components.
Google play link: <https://play.google.com/store/apps/details?id=com.chirathr.jiofidash>
- June 2018 **Product Management System**, VillaSpa (startup based in Sweden).
- Developed a product management system to list, update and view product information.
 - Developed an authentication system to handle login, registration, password reset and password change.
 - Created JWT token-based authentication system and API's to handle product information.
- Technologies used:** Python, Django, Django REST framework, MySQL, Bootstrap 4, Forola and jQuery.
Link: <https://chirathr.com/#portfolio>
- June 2017 - **Club Management System**, FOSS@Amrita
- March 2018
- Developed a system that handles student details, progress, events, achievements, attendance, status updates, teams and workshop registrations.
 - Used Gmail and Telegram API to automate status update and attendance reports.
 - Created API for attendance and a client program that uses WiFi to automate marking attendance.
 - Created views that handle registrations for various events, workshops and student applications.
 - Designed a light, simple and easy to use UI using Bootstrap 4 and JavaScript.
 - Mentored a team of students to improve, test and bug fix various parts of the application.
- Technologies used:** Python, Django, Django REST framework, AWS EC2, Let's Encrypt, Google API client, MySQL, Bootstrap 4 and JavaScript.
Source code: <https://github.com/amfoss/fosswebsite>, **link:** <http://amfoss.in/>
- August 2017 - **Self-driving RC car using Machine Learning**, Amrita School of Engineering
- Jan 2018
- Created a neural network based self-driving model that drives an RC car around a track.
 - Build the RC car with motor controllers, servos, ultrasonic sensors, camera and a Raspberry Pi.
 - Developed modules that interface and control hardware components using a Raspberry Pi.
 - Developed server-client services that control movement and sensor data across the network.
 - Trained an artificial neural network that predicts driving directions from the camera feed.
 - Trained a Haar-cascade model to detect signboards and traffic signals.
- Technologies used:** OpenCV, Python, Numpy, Raspi-cam, GPIO module and Raspbian.
Source code: <https://github.com/Chirath02/Picar>

Open source contributions

- March 2018 **Debian: contributions to distro-tracker**
- Scripts to parse data from package repositories and extract component information.
 - Scripts to automate the creation and retrieval of a sample database using GitLab CI and API.
 - Debian team's packages overview page mockup and other bug fixes.
- Technologies used:** Python, Django, Bootstrap 4, GitLab CI
Pull requests: <https://salsa.debian.org/qa/distro-tracker/>

March **OWASP: UI design for Web Challenges**

2016 Developed a responsive web editor for Hackademic Web challenges. This contribution helped me learn to create interactive web pages using JavaScript and CSS.

Pull request: <https://github.com/Hackademic/hackademic/pull/210>

October **Mozilla: Contributed to Mozilla Firefox**

2015 Fixed a bug in Firefox browser by removing outset class from custom notification bar bindings.

Bug ID: [1216941](https://bugzilla.mozilla.org/show_bug.cgi?id=1216941)

Achievements

April 2017 Represented Amrita University at **Smart India Hackathon - Grand Finale** organized by the **Government of India**.

August 2014 Awarded **Scholarship** for pursuing **Undergraduate Degree in Computer Science and Engineering** at **Amrita School of Engineering**, Amritapuri.

July 2014 **Rank Holder** in **Computer Science** for **All India Senior School Certificate Examination** at Vijaya Matha Public School.

Technical writing

November 2016 **Setting up and Configuring ownCloud**, Open Source For You magazine

Article on ownCloud, a free and open source private cloud platform to help you access, sync and share data.

Online link: <http://opensourceforu.com/2016/11/setting-configuring-owncloud/>

Technical Skills

Good Python, HTML/CSS

Intermediate C/C++, JavaScript, Java, MySQL, Bash, PHP, x86 and x64 assemble programing

Frameworks Django, OpenCV, TensorFlow, Flask, AngularJS, Android, TestNG and Selenium

Tools Git, AWS, Linux

Workshops

April 2018 **Workshop on Cyber Security for School Students**

Conducted workshop on Cyber security awareness and Python programing as part of **Better Internet for Kids Online Safety(BIKOS)** initiative.

Repository: <https://github.com/amfoss/bikos-workshop>

September 2017 **Learn to Code**

Conducted two day workshop on web development, Linux commands and Python for first year students as part of **FOSS@Amrita** outreach program.

Repository: <https://github.com/Chirath02/learn-to-code>

May 2017 **Django web development workshop**

Conducted ten day workshop on HTML, CSS, JavaScript, Python and Django as part of the Road To Excellence program from CIR, Amrita School of Engineering.

Repository: <https://github.com/Chirath02/web-development-workshop>

Activities

FOSS club Active member and mentor of the Free and Open Source club(FOSS@Amrita). I mentor juniors with projects and help them improve their technical skills.

Volunteering Organised MediaWikiToLearn Hackathon and Raha Robotic conference. Took part in various charitable works of Mata Amritanadamayi Devi and volunteered for Amritavarsham 61 and 63.

Campaigns Conducted a campaign at Alappuzha TD Medical College Hospital to spread awareness about waste management and cleanliness. Prepared posters and brochures to spread awareness.

General

Portfolio - chirathr.com | **Blog** - blog.chirathr.com | **GitHub** - github.com/chirathr

Twitter - twitter.com/chirathr | **LinkedIn** - linkedin.com/in/chirathr