

Chirath R

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Education

- 2014–2018 **Bachelors in Computer Science and Engineering**, Amrita School of Engineering, **CGPA: 9.06/10**.
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

- June 2017 - **Club Management System**, FOSS@Amrita
current
 - Developed a system that handles student details, progress, events, achievements, attendance, status updates, teams and workshop registrations.
 - Using the Gmail and Telegram API automated status update and attendance reports.
 - Developed a REST API with a JWT token-based authentication system.
 - Created APIs for attendance and a client program that uses Wi-Fi 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 **Self-driving RC car using Machine Learning**, Amrita School of Engineering
2017 - 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.
 - Wrote 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>

March **Yukti CTF Framework**, Amrita Center for Cyber Security
2017
 - Developed a platform to spread awareness among students about various cybersecurity issues.
 - Developed the CTF challenge page, registration, and scoreboard system using Python and Flask.
 - Designed the challenges page using AngularJS to display and accept solutions to problems.
 - Worked with a team of 7 to design an RPG style game that helps keep the interest of students.

Technologies used: Python, Flask, AngularJS, Bootstrap, SQLite
Source code: <https://github.com/Chirath02/YuktiCTF>

December **Home security system**
2016
 - Developed a program for Arduino Uno that uses data from ultrasonic module to detect intrusion.
 - Created an Android application that notifies the user using call or text in case of an intrusion.

Technologies used: C, Java, Android
Source code: <https://github.com/Chirath02/arduino-home-security>

Open source contributions

- March **Debian: contributions to distro-tracker**
2018
 - 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](#)

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

2016 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 programming

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 programming as part of **Better Internet for Kids Online Safety(BIKOS)** initiative.

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

September **Learn to Code**

2017 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

GitHub: [Chirath02](#) | Twitter: [@ChirathR](#) | LinkedIn: [ChirathR](#) | Blog: chirathr.wordpress.com