

Cathal Breathnach

FINAL YEAR ELECTRONIC & COMPUTER ENGINEERING STUDENT

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A high achieving and innovative final year undergraduate Electronic and Computer Engineering student seeking exciting graduate opportunities. Completing course work in May 2018. Well organised with a strong attention to detail and the ability to solve complex problems as part of a team. Has the ability to learn quickly and efficiently to a high performance level. Interested in the design of purposeful product offerings and artificial intelligence applications.

Education

National University of Ireland, Galway

Galway, Ireland

BACHELOR OF ENGINEERING (ELECTRONIC & COMPUTER)

2014 - PRESENT

- Studied a wide variety of hardware and software modules.
- Overall Third Year Result: 86.2%, First Class Honours
- Overall Second Year Result: 88.58%, First Class Honours
- Overall First Year Result: 89.90%, First Class Honours

National University of Ireland, Galway

Galway, Ireland

BACHELOR OF SCIENCE (FIRST YEAR ONLY)

2013 - 2014

- Overall First Year Result: 95.75%, First Class Honours.
- Subjects Studied: Mathematics, Physics, Chemistry, Applied Mathematics.

St. Joseph's College "The Bish"

Galway, Ireland

LEAVING CERTIFICATE

2008 - 2013

- Overall result: 625 points (Maximum points).
- Subjects Studied: English, Irish, Mathematics, French, Physics, Chemistry, Applied Mathematics.

Projects

Advanced Techniques for Particle Swarm Optimisation

FINAL YEAR PROJECT

- Analysed and researched variations of an evolutionary algorithm to implement new variants.
- Developed a simulator for comprehensive testing and the collection of large amounts of data.
- Analysed results to determine statistical improvements in performance.

Bluetooth-Enabled Electro-mechanical Xylophone using Arduino

SECOND YEAR MICROPROCESSORS SYSTEMS ENGINEERING PROJECT

- The creation of an electronic xylophone wirelessly controlled by a user worn glove. Featured record and playback functionality.

Work Experience

Aerogen

Galway, Ireland

ELECTRONIC & COMPUTER ENGINEERING INTERN

January 2017 - August 2017

- Student role in the industry leader for high performance aerosol drug delivery.
- Worked in research and development for new products, including working on a C# GUI to interact with PCB components.
- Responsible for product testing, analysing and collecting results for reports.

River Deep Mountain High

Galway, Ireland

SALES ASSISTANT

Summer 2015, 2016

- General sales assistant role in a city centre outdoor shop, helping and dealing with customers and sales.

Rusheen Bay Windsurfing

Galway, Ireland

WATER SPORT INSTRUCTOR

Summer 2012, 2013, 2014

- Worked as an instructor in a busy centre to provide an enjoyable experience for customers.

Other Experience

National University of Ireland, Galway

Galway, Ireland

STUDENT AMBASSADOR

2014 - PRESENT

- Lead ambassador role, helping with organisation of other ambassadors and of events.
- Representing and promoting the university, interacting with prospective students and academic guests.

National University of Ireland, Galway

Galway, Ireland

CÉIM LEADER

2015 - 2016

- Leader for a peer-assisted learning (PAL or PASS) scheme run for first year engineering students.

NUIG Mountaineering Club

Galway, Ireland

CLUB CAPTAIN, MAAMTURKS CHALLENGE CHAIRPERSON, COMMITTEE ADVISOR

2014 - PRESENT

- Captain of the club for 2014-2015. Overseeing the entire running of the largest university club. Included responsibilities to manage the organisation of weekly events and two international trips. Worked with university staff to overcome problems.
- Involved with the Maamturks Challenge, one of Ireland's largest hillwalking events, since 2013.
- Advisor to the club committee for 2017-2018.

1st Galway St. Joseph's Scout Group

Galway, Ireland

SCOUT LEADER, ROVER SCOUT

2014 - PRESENT

- Assisting in planning and implementing an exciting and safe programme for children aged 12-15.
- A member of the national team for the Irish Rover Network for third level groups from 2015 - 2017.
- Chosen as one of ten Rover Scouts to represent Ireland on a cultural exchange to Japan in 2016.

NUIG Rover Society

Galway, Ireland

AUDITOR, TREASURER, FOUNDING MEMBER, PROJECT MANGER

2014 - 2017

- Treasurer of the university Scout society for 2014 - 2015. Auditor for 2015-2016, overseeing all aspects of the society.
- Team Lead for the organisation a national inter-varsity event in 2017, named best national Rover event for that year.

Achievements

- 2018 **University Scholar**, NUI Galway. Awarded for high results. Also awarded in 2017, 2016, 2015, 2014.
- 2015 **Explorer Belt Award**, Scouting Ireland. One of the highest awards attainable for Rover Scouts.
- 2015 **Club Captain of the Year**, NUI Galway. Chosen amongst all captains from over 50 clubs.
- 2013 **Entrance Scholar**, NUI Galway. Awarded based upon Leaving Certificate results.
- 2013 **Brother Angelus Award - Student of the Year for Academic Endeavor**, St. Joseph's College.
- 2012 **Chief Scout Award**, Scouting Ireland. One of the highest awards attainable for youth members.

Skills

Programming	Has knowledge of C, Java, Arduino, Python, HTML, CSS, Android application development.
Applications	Experience using MATLAB, LabView, and Microsoft Office Applications.
Operating Systems	Good knowledge of Windows, Mac OS and Linux operating systems.
Electronics	Knowledge of HDL and chip analysis, signal processing and processor architecture.
Teamwork	Have worked on several group projects through university and through other past-times.
Communication	Excellent oral and written communication skills.
Problem Solving	Have a proven ability to take a structured and logical approach to problems.
Leadership	A determined leader and able to manage people and their abilities effectively.
Languages	Have a conversational standard of French and Irish.

Hobbies & Interests

Technology	Self taught programming for different applications. Websites and app development.
Mountaineering	A regular hiker and climber. Have travelled extensively in Ireland and abroad.
Running	Have been running for a number of years, have taken part in several events.
Scouting	Have been involved in the Scout movement since the age of 11. An active member.
Photography	Have recently become interested in photography, documenting my travels and adventures.
Music	Have played the piano for over 8 years to Grade 7 level. Have also played the guitar.
Reading	Enjoys reading both fictional and non-fictional books.