

BRIJENDRA NAG

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Skills

Programming Languages:

Java, C, HTML5, Racket,
JavaScript, Node.js, SQL

Tools:

Git, Unix, JSON, Android
Studio, Facebook Graph API,
Microsoft Cognitive Services
APIs, Unity 3D, AWS

Other:

Object Oriented Programming,
Imperative Programming,
Functional Programming, Data
Structures, Algorithms, Social
Media Marketing, REST APIs,
Unit Testing, Black-box &
White-box Testing

Experience

SpaceX Hyperloop Competition (Oct-Dec, 2016)

Sponsorship relations
management & **Journalism** in
Waterloop, the **only Canadian**
team in the final round of the
international SpaceX
Hyperloop Pod Competition.

Education

University of Waterloo,

Candidate for Bachelor of
Computer Science (2016-2021)

Relevant Coursework:

Algorithm Design and Data
Abstraction, Designing
Functional Programs

Awards

President's Scholarship of Distinction, University of Waterloo

Awarded to students with
admission averages of 95% or
higher.

Projects

Caffeine March, 2017

- **Won 2nd Place** at **Start Hacks** for designing a product which prevents drivers from dozing off, hence **reducing accidents**.
- Integrated '**Muse: the brain sensing headband**', with an **Android App via Bluetooth**.
- Processed **real-time brainwave & accelerometer** data from **Muse** to track head-position in 3D and monitor brain activity.

Cyphotron March, 2017

- Implemented a **256 bit RSA cryptosystem** from scratch with **Java** and used the **BigInteger** data type for storing integers **dynamically**.
- Scalable and asymmetric **encryption algorithm** with a public key to encrypt the message and a secured private key to decrypt it.

Euphorify January, 2017

- Engineered a **web application** for social media at **PennApps XV** which analyses your Facebook photos and generates a collage.
- Utilized the **Facebook Graph API**, **Microsoft Emotion API** and set up a **node server** with **AWS** to process sensitive data securely.
- Integrated the two **APIs** asynchronously using **JavaScript & HTML**, efficiently sorted the obtained images to **generate a collage** containing **images of a particular emotion**.

ReactOnFly November, 2016

- **Chrome extension** built at **HackPrinceton** which automatically '**reacts**' to Facebook posts by detecting your reaction.
- **Brainstormed the concept** of the extension, integrated the **Facebook Graph API** with it and wrote a script in **Java** for continuously deleting redundant data from the server.

Archify November, 2016

- '**Ready for Emergency**' **Android app** built at **ArchHacks** which automatically requests help from an appropriate hospital.
- **Designed an algorithm** which chooses the appropriate hospital at any instance. Built the **back-end with Java** and implemented **database querying** with **CSV**, its integration with the app.

Volunteering

Hack the North Waterloo, Canada

- Assisted in the **delivery of food** at the Hackathon.
- **Received participants** from other universities and ensured a smooth event by **floor patrolling**.

Everyone Grows Lucknow, India

- Provided **elementary education** to underprivileged children.
- Enrolled them into schools and **raised funds** for their fees.