

# Pranav Ravichandran

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## Education

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### Anna University

2009-2013

*St. Joseph's College of Engineering, Electrical and Electronics Engineering Department*  
Bachelor of Engineering in Electrical and Electronics Engineering  
CGPA: 7.44/10

### Thesis, Final year

2013

*Gestural interface with Electrooculogram-based eye gesture detection and classification.*

- Implemented processing code for the microcontroller to transmit signal data to the computer.
- Implemented the backend code for classification of signal data, including support vector machines, linear discriminant analysis and distance metrics (Euclidean, Chebyshev, Taxicab and Pearson).
- Created plug-in modules for extending core functionality, such as cursor control, toy car navigation etc.

### University of Florida

Aug 2015 onwards

*College of Engineering, Computer and Information Science and Engineering Department*  
Master of Science in Computer Science

## Technical Strengths

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Languages	Python, Common Lisp, JavaScript, C
Tools & Environment	Unix, Emacs, Bash, Git, Make/Cmake, Valgrind, Nginx, LaTeX
The Web	HTML, CSS, Django, Node.js, jQuery, Backbone.js
Databases	PostgreSQL, MongoDB

## Experience

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### Google Summer of Code, Google

Apr - Sep 2011

*Student Developer*

*Remote*

- Implemented improvements and fixes to SMARTS, a Game Artificial Intelligence library for KDE Gluon.
- Integrated SMARTS into KDE Gluon, giving it the capabilities of a Behavior Tree system.
- Developed a KPart GUI to plug the SMARTS Behavior Tree editor into Gluon.
- Demonstrated the implementation with *The Quantum Sea*, an AI game of molecular interaction.

### HappyFox, Tenmiles

Jan 2014 - Sep 2014

*Full-stack Developer*

*Chennai, India*

- Implemented features, enhancements and integrations for HappyFox and related components.
- Developed a decoupled REST-based task-server with Celery and RabbitMQ, to handle deferred services.
- Implemented contextual search for knowledge base articles using Latent Semantic Analysis.
- Created an experimental test data generator which generates sample data by recursively crawling tables in a database.

### HappyFox Chat, Tenmiles

Sep 2014 - May 2015

*Core Developer*

*Chennai, India*

- Core member in development, maintenance and testing of the product and its related components from scratch.
- Implemented features covering the whole stack with components in MongoDB, Node.js, Backbone.js and various other JavaScript libraries.

### National Institute of Information Technology

2009

*Computer (A+) and Network (N+) Technician Certification.*

*Chennai, India*

## Open Source Contributions

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### Mozilla

2012-2013

- Developed a code commenting and uncommenting feature for the Mozilla Firefox source editor.
- Implemented W3C spec restrictions on WebIDL dictionary member types.
- Contributed other patches and bugfixes.

### PySynth

July 2012

- Created an interactive Command Line Interpreter to parse Musical Notation and render tunes on the fly.
- Implemented multi-library support for audio playback.

### Others

- Minor patches to Linux Kernel, CPython, Tomahawk Media Player among others.

## Independent Projects

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### Tenor

Clojure

*A project to construct music theory and generate accessible music with Clojure and Overtone.*

### Transit.js

JavaScript

*An extensive library to create purely client-side, interactive transit maps. Demonstrated in rail network simulation for the [Chennai Suburban Rail](#) system.*

### Scrip

JavaScript

*A tiny domain-specific language described using Parsing Expression Grammar (PEG) to compute debts.*

### Suburl

Common Lisp

*A placeholder substitution-based URL shortener and sanitizer that allows shortening individual parts of the URL as parameters to the short URL.*

### This.onloop

Common Lisp

*Music Search and Album discovery tool that uses the Spotify Music API to extract information and crawls the web to aggregate album reviews.*

### Howstat

Python

*Resident player-statistics lookup bot for Reddit's Cricket Community, [/r/Cricket](#).*

### PDoS

C

*Patterned Disruption of Silence - An exercise in Auralization, extrapolating algorithmic patterns, sorting algorithms in particular, to musical notes.*

### Others

*An exhaustive list of projects, contributions and other open source work is available at my [Github page](#).*