Akshay Deodhar

47/3, Sankalp Sociey
Paud Road, Pune 411038

+91 7057018422
akshayrdeodhar@gmail.com
github.com/Bri9k

Education

- **College of Engineering, Pune** — Pune
  Computer Engineering, CGPA 9.68 — *August 2017 - Present*
- **Fergusson College** — Pune
  HSC, 92.4% — *2015 - 2017*
- **BVB's Paranjape Vidya Mandir** — Pune
  SSC, 95.2% — *2005 - 2015*

Work Experience

- **COEP Satellite Team** — Pune
  Attitude Determination and Control Subsystem — *November 2017 - Present*
  - Writing and mantaining code for simulating motion of satellite
  - Integrated the publically available code for NRLMSISE-00 atmospheric model into simulation
  - Created a continuous-thrust orbit simulation using NASA's General Mission Analysis Tool and it's Python interface
  - Wrote custom python code for finding an optimum sail normal vector for solar sailing satellite, calculate forces acting on satellite for that orientation.
  - This code is called from the GMAT script to determine external force

Selected Projects

- **Trillian- a command-line chess game**
  Data Structures and Algorithms project
  - Compatible with Forsyth-Edwards format
  - Move validation and legal move generation
  - Minmax with alpha-beta pruning used for game tree search
  - Reasonably competent engine, beats novices
- **RankRecommend- a rooted-pagerank based web app for github follow recommendations**
  Principals of programming languages project
  - Flask server accepts github username or graph text file with root node
  - Requests and BeautifulSoup used for scraping github to build user neighbourhood graph
  - Graph represented in NetworkX. Numpy used to solve for the rooted pagerank *eigenvector*
  - Users sorted on the basis of eigenvector entries, top follow recommendations displayed by server

Publications

- **Attitude Control Using 3 Axis Magnetorquers and Pitch Axis Reaction Wheel for Solar Sailing Satellite COEPSAT-2**
  69th International Astronautics Congress (IAC) Bremen, Germany.
  Co-authored with 6 others

Skills

- **Programming**
  - Proficient: C, Python
  - Familiar: Scheme, x86 Assembly, Bash, C++
- **Tools**
  - Unix utilities, Git, LaTeX, Gnuplot, Make, Vim, Markdown
- **Languages**
  - English, Marathi, Hindi

Extra-Curricular Activities

- **Chess team**
  School, Fergusson, COEP
- **Abhiyanta**
  COEP's magazine club
- **Personal blog**
  Bri9k.github.io

Hobbies

Love reading fantasy, science fiction, and farce. Enthusiastic about trekking. Listen to (and attempt to play on harmonium) all kinds of music. Write a bit of limerick. Currently learning rowing.