Ayush Baid
Electrical Engineering
Indian Institute of Technology Bombay
Specialization: Communication & Signal Processing

12D100002
Dual Degree (B.Tech+M.Tech.)
Male
DOB: 03/01/1995

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2017	9.14

PROFESSIONAL EXPERIENCE

Sony Corporation, Tokyo | SOFTWARE ENGINEERING INTERN   *May 2015 - Jul 2015*
- Designed new **cloud based testing environment** for Android devices and upgraded the existing framework's APIs
- Analyzed and evaluated the performance of **Android virtualization frameworks**
- Developed stubs in Android's source code to workaround the restrictions of native emulator

FOSSEE | DEVELOPER, SCILAB SIGNAL PROCESSING TOOLBOX   *Dec 2015 - Present*
The team develops and promotes free and open-source software in education as part of an initiative by the Govt. of India
- Coded functions in Scilab to emulate their MATLAB counterparts as a part of 5-member team
- Studied and implemented algorithms from areas including pseudospectrum evaluation, filter coefficient estimation

KEY PROJECTS

Laparoscopy Image Enhancement | GRADUATE DISSERTATION   *Jan 2016 - Exp. Jun 2017*
Alleviating smoke, noise, and speckles observed in laparoscopy images   PROF. S. AWATE, PROF. S. MERCHANT
- Modeled a **novel** joint optimization framework using **Markov Random Fields** to impose priors on the variables
- Studied and implemented priors using non-negative sparse coding and kernel density estimation
- Exploring various optimization strategies including **Expectation-Maximization (EM)** and **Variational Bayes**

Point Set Registration | COURSE PROJECT   *Mar 2016 - Apr 2016*
Using point set registration techniques to classify dorsal images of fish   PROF. A. RAJWADE
- Designed an algorithm to smoothen the boundary and autonomously place points to efficiently capture curvature
- Evaluated the performance of **Iterative Closest Point** and **Robust Point Matching** algorithms

Temporal Super-Resolution in Videos | RESEARCH PROJECT   *Feb 2015 - Apr 2015*
Increasing frame rate of videos using spatio-temporal correlation   PROF. A. KUMAR, PROF. S. CHAUDHURI
- Implemented the **Papoulis-Gerchberg** method for pixel-wise interpolation across the temporal domain
- Investigated the super-resolution of motion vectors considering it as an estimate of physical motion of objects

IIT Bombay Racing | JUNIOR DESIGN ENGINEER, BATTERY DIVISION   *Jul 2013 - Jun 2014*
The 70+ member team represents IITB at **Formula Student UK**, an electric racing vehicle competition
- Achieved a **35% reduction** in weight by analyzing the performance of last year's car
- Implemented **temperature monitoring system** for the battery pack ensuring compliance with standards

SCHOLASTIC ACHIEVEMENTS

- Completed a **minor degree** in **Computer Science and Engineering** with a CPGA of 8.4   *2016*
- Among 9% students awarded **branch change** after freshmen year in IITB on the basis of grade points   *2013*
- Ranked in **top 50 nationwide** in Technothlon, a school championship organized by Techniche, IIT Guwahati   *2009*
- Ranked in top 1% statewide in National Standard Examination in Junior Science, conducted by IAPT   *2009*

POSITION OF RESPONSIBILITY

Institute Student Mentor   *Jun 2016 - Present*
Selected on basis of peer review and interpersonal skills as part of a team of 82 mentors from 368 applicants
- **Guiding 11 freshmen** focusing on academic and holistic development, and helping the transition to campus

EXTRACURRICULAR ACTIVITIES

Android	• **1st position** out of 158 teams in Aakash tab app development contest for residents of IITB • Developed a multi-city cab/auto fare calculator which has **10,000+ installs**	*2014* *2013*
Robotics	• Designed and fabricated an autonomous self balancing robot using **PID control** mechanism • Participated in autonomous line follower robot competition	*2013* *2013*
Trekking	• Completed a 5-day trek summiting Kedarkantha Peak, Uttarakhand (12,500 feet)	*2016*