

# Ashish Tibrewal

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## Education

**The University of Bristol**, Bristol, UK

*Master of Engineering (M.Eng.) in Computer Science and Electronics*

2012 – 2016

- Degree Classification: Upper Second Class Honours (2:1)
- Core Modules: Principles of Programming, Object Oriented & Functional Programming, Engineering Mathematics, Discrete Mathematics, Data Structures & Algorithms, Digital Systems, High Performance Computing, Networks & Protocols, Advanced Computer Architecture, VLSI Design
- Research Projects: Feedback Control & User Interface Design for a Low Cost 3D Scanner, Disaggregated Data Centres – Simulation & Analysis of Resource Allocation Algorithms
- Group Projects: Digital Design – Peak Detector Design, Communications – Wireless Modem Design, Professional Studies – General Electric (GE) Audit Report, Interactive Devices – Using Passive Acoustic Sensing to Create a Touch Sensitive Surface, Robotic Systems – Localisation System Design

**The Assam Valley School**, Assam, India

2004 – 2012

*Indian School Certificate (ISC), 2012 (Equivalent to UK A-Level)*

- English - 88%, Mathematics - 90%, Physics - 80%, Chemistry - 86%, Computer Science - 98%, Environmental Education - 94%

*Indian Certificate of Secondary Education (ICSE), 2010 (Equivalent to UK GCSE)*

- English - 80%, Hindi - 76%, Environmental Education - 95%, Social Studies - 90%, Mathematics - 88%, Sciences - 86%, Computer Applications - 94%

## Professional Experience

**Research Engineer at Renishaw plc**, Wotton-under-Edge, UK

Jan – Sep 2015

Renishaw are a world leading engineering company with expertise in high-precision measurement and health care, and are listed on the FTSE 250 index – I was part of their Group Engineering division.

- Researched, performed a feasibility and concept study, and built a prototype of a passive 3D scanner
- Designed, developed, simulated, and analysed a serial communication and PI control system in VHDL
- Designed a high-level GUI application in C# to interface with the system. Optimised performance by implementing a multi-threaded design, and integrated support for MATLAB and GNU Octave to run image processing script using Automation. Designed APIs to support EmguCV, Microsoft SQL Server, and an in-house developed graphics rendering library
- Completed preliminary schematic and PCB design for the next iteration of development
- Drafted comprehensive documentation covering design and implementation details including software documentation. Involved in code/design reviews and presentations with senior members of the team
- Trained new interns on Renishaw's in-house RTL/HDL design, simulation, and synthesis tools
- Completed several advanced training courses run by both internal and external industry professionals

**Software Analyst Intern at Hidden Brains InfoTech**, Ahmedabad, India

Aug – Sep 2014

Hidden Brains are a privately owned IT & software development company with expertise in web, mobile application development, and embedded solutions – I was part of their planning and analysis team.

- Analysed client proposal documents, drafted software requirements specification (SRS), scope of work, business requirement, and database documents, and created UML models for several website and mobile application development projects
- Improved existing documents to minimise development required reducing delivery time and costs

**Captain of the school's Lawn Tennis Team at The Assam Valley School**, Assam, India

2010 – 2011

- Represented and led the Assam Valley School's lawn tennis team at several inter-school tournaments.

## Achievements

- Received an honourable mention for the 'Dean's International Intern Scholarship Scheme' at the University of Bristol for my internship at Hidden Brains InfoTech 2014
- Recipient of the 'Barry Thomas Scholarship for Computer Science' at the University of Bristol 2012
- Delegate to the *International Exchange Programme* held at St.Ives High School in Sydney 2010
- Recipient of 'Major Colours' for Lawn Tennis and Photography at The Assam Valley School 2009 – 2011
- Represented Assam at the *Junior National Squash Championships*, Mayo College, India 2007

## Skills/Interests

**Programming:** C, C++, C#, Java, MATLAB, Python, Haskell, SQL, VHDL, Verilog

**Scripting/Markup:** HTML, CSS, JavaScript, Bash, Markdown, YAML, XML,  $\LaTeX$

**Technologies/Frameworks:** .NET Framework, Jekyll, Django, JUnit, TravisCI

**Open Source:** OpenMP, OpenMPI, OpenCL, OpenGL, OpenCV (EmguCV)

**Tools:** Git, Vim, CLI, Shell (Bash), GNU toolchain, Valgrind, Visual Studio, MS Office Suite, Photoshop

**Platforms:** macOS, Linux, Unix, MS Windows

**Languages:** English, Hindi, Assamese

**Interests:** Programming, Reading, Photography, Music, Sports, Cooking/Baking, Travelling, Equestrianism

## Volunteering

Member of The Assam Valley School's 'Social Service League' and the 'Literacy Programme Campaign'