

# Debargha Dey

debarghadey@gmail.com  
+31 6 38 74 26 60  
+1 615 473 1057  
[www.linkedin.com/in/debarghadey/](http://www.linkedin.com/in/debarghadey/)

LaPlace Building 1.37  
Technische Universiteit Eindhoven  
5612 AZ, Eindhoven, The Netherlands



## SUMMARY

With a background in Computer Science and Software Engineering, I have shifted my focus over time towards usability, human factors, and user experience research/design. My research interest is in the field of automotive Human Machine Interfaces and particularly autonomous driving systems. I am passionate about people, and believe that human centered design is the only way towards true innovation.

## EXPERIENCE

Oct 2015 – present

### **User System Interaction trainee, Department of Industrial Design** Eindhoven University of Technology (TU/e), Eindhoven, The Netherlands

- Currently focused on Human Computer Interaction and User Experience Research
- Perform research and development of innovative concepts and prototypes
- Execute User Research and test interfaces and devices iteratively
- Evaluate products and applications according to the principles of User Centered Design
- Synthesize data to extract actionable and tangible insights

Apr 2013 – Sep 2015

### **Software Engineer** The Advisory Board Company, Austin, TX

- Developed analytics tools for workflow management on a clinical data platform
- Developed an automated testing harness for medical data validation that streamlined scalability and improved throughput by 20%.
- Was responsible for designing and developing web applications and components
- Worked in an agile environment in Java and C# with a diverse team
- Conducted peer code reviews across the development team

Jun 2012 – Nov 2012

### **Software Developer** Epic Systems Corporation, Madison, WI

- Supported the software engineering team and fixed coding issues
- Developed an internal search utility for a collection of company-specific resources

Jan 2012 – May 2012

### **Graduate Research Assistant** Vanderbilt University, Nashville, Tennessee

- Performed pattern identification and time series analysis of medical data
- Executed data mining and created a model, which was used to predict future medical record accesses aimed towards reduction of load wait time and outlier detection
- Worked with MATLAB and C++ to implement the model

Aug 2010 – May 2012

### **Graduate Teaching Assistant** Vanderbilt University, Nashville, Tennessee

- Taught 2 different subjects (Programming in Java, and Computer Organization) in classes of up to 20 students
- Set assignment question papers, graded them, held help sessions and aided students' understanding in office hours
- Received accolade for being an "effective imparter of knowledge"

Nov 2009 – Jul 2010

### **Computer Programmer (Systems Engineer)** Tata Consultancy Services, Mumbai, India

- Worked as a part of a 3-member team in developing and debugging back-end code, running batch-processing jobs, and version control of a banking software.
- Coordinated weekly meetings, and communicated reports to the team

## EDUCATION

Oct 2015 – present	<b>Eindhoven University of Technology (TU/e), Eindhoven, The Netherlands</b> Professional Doctorate in Engineering, User System Interaction
Aug 2010 – May 2012	<b>Vanderbilt University, Nashville, Tennessee, USA</b> Master of Science, Computer Science
Jul 2005 – May 2009	<b>West Bengal University of Technology, Kolkata, India</b> Bachelor of Technology, Computer Science & Engineering

## SELECTED USER RESEARCH & INTERACTION DESIGN PROJECTS

- **Ratelt:** Conducted user research and designed a review platform called “Ratelt” that unifies various social network accounts for a cohesive product and service review experience.
- **Information exchange in NICU:** Provided a solution for the high-pressure, high-intensity Neo-natal Intensive Care Unit in hospitals to provide nurses with right information at the right time with an optimal interface without overwhelming them.
- **Evaluating Empathy in Crowdsourcing UI:** Performed research and conducted experiments to find the effects of introducing empathy in a UI using text, and investigated its effect in workers’ motivation in a crowdsourcing environment.
- **Redesigning Eventix dashboard:** Redesigned the dashboard and workflow of Eventix (a ticket-shop and marketplace that allows for people to create events and purchase tickets) that allowed visualization of complex logistical information in an organized, coherent, and logical manner.
- **Dynamic 3D auto navigation:** Created a prototype for a concept that projects navigation directions on an automobile Heads-Up-Display by adjusting for the driver’s eye positions and parallax, and dynamically changing context according to the environment. This is an augmented version of currently available 2D HUD navigational markers.

## TECHNICAL SOCIETY AFFILIATIONS

- Institute of Electrical and Electronics Engineers (IEEE) / IEEE Vehicular Technology Society
- Association for Computing Machinery (ACM)

## SKILLS & STRENGTHS

Research Methods	Usability studies, Surveys, Diary studies, A/B testing, Ethnographic/Field studies, Competitive analysis, Remote usability, Competitive evaluations, Ongoing learning of quantitative models and statistical analysis techniques.
Prototyping	Sketching, Wire framing, Developing mock-ups (Paper, Video, and High-level prototyping), Cardboard modeling
Programming Languages	Java, C++/ STL, C, C#, Visual Basic 6, SQL, HTML/CSS, elementary JavaScript
Tools	Axure RP, Balsamiq, MATLAB/ Simulink, R, Adobe {Illustrator, Photoshop}, Processing, Unity
Product Development Methodologies	Agile Scrum, Waterfall
Languages	English (fluent), Dutch (basic), Bengali (fluent), Hindi (conversational)

- Ability to deliver insights verbally and visually in a way that generates empathy, emotion and engagement from the product team and other stakeholders.
- Experience in collaboration with product teams, developers, interaction designers, and visual designers in international settings including Europe, Asia, and United States.
- Active member of the professional and academic community involved in authoring, reviewing, presenting and publishing papers.

## ACCOMPLISHMENTS & ACTIVITIES

- Received full tuition scholarship at Vanderbilt University between 2010 and 2012.
  - Won the “most diligent student” award at West Bengal University of Technology in 2009.
  - Current board member of USINet (TU/e USI alumni stitching program).
  - Co-organizer of UXCampNL 2016.
  - Involved in blood donation drives in American Red Cross between 2014 and 2015.
  - Active in the local chapter of Toastmasters, and completed the Competent Communication certificate
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