

Debargha Dey

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