iTelematics Software Private Limited

Courtesy: https://www.google.com/selfdrivingcar/paint/
Agenda

- About us
- Technology Research
- Telematics Professional | Job Level
- Syllabus - Level T1, T2, T3, T4, T5
- Internship Project Details
- Research Deliverables & Evaluation Criteria
- Pricing | Cost structure
- Contact us
About us

iTelematics Software Private Limited is a Bengaluru based company, currently carrying out Research and Development in Automotive Software -

• In-Vehicle communication
• Vehicle to Vehicle Communication

Partnership with Universities

• Academic / Start-up projects.
• Helping Researchers with their Patents and doctoral thesis.
Technology Research

Telematics Engineering

Autonomous Vehicles | Security

Software Engineering | Internet of Things

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Courtesy: http://more-sky.com/data/out/12/IMG_512872.jpg
Telematics Professional | Job Level

Entry level programs (2 to 12 months Internship)

• T1: Freshers | Trainee | Intern
• T2: Software Engineer | Developers

Research programs

• T3: Telematics Engineer | Autonomous Car

Corporate level programs

• T4: Security Architect | Technical Lead
• T5: Product Manager

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# Syllabus: Telematics Engineering

## T1: Automotive Telematics Software
- **Y1-Q1**: Telematics Technologies & Platform
- **Y1-Q2**: Telematics Software Engineering
- **Y1-Q3**: Ethical CAR Hacking
- **Y1-Q4**: Automotive Security and Privacy
- **Y1-E1**: CAN Bus - Secure Programming

## T2: Connected Vehicle Software
- **Y2-Q1**: Telematics Communication Technologies
- **Y2-Q2**: In-Vehicle & Vehicle to Vehicle Communication
- **Y2-Q3**: Vehicular ad hoc networks
- **Y2-Q4**: Connected Vehicle Security
- **Y2-E1**: Telematics Communication Protocols

## T3: Autonomous Vehicles (AV)
- **Y3-Q1**: Driverless CAR Technologies
- **Y3-Q2**: Intelligent Transportation Systems
- **Y3-Q3**: Real time operating systems for AV.
- **Y3-Q4**: Autonomous Vehicle Security
- **Y3-E1**: Machine Learning & Artificial Intelligence

## T4: Automotive Software Security
- **Y4-Q1**: Telematics Software Security
- **Y4-Q2**: Automotive Security and Privacy
- **Y4-Q3**: Connected Vehicle Security
- **Y4-Q4**: Automotive Cyber Security
- **Y4-E1**: Autonomous Vehicle Security

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Wireless Vehicle Security

Domain:
- Automotive Software | Autonomous Vehicles | Security

Technologies:
- Google’s Android Auto | Waymo
- Intel’s Automated Driving Solutions
- Apple’s CarPlay | iOS app development

Tech - Entrepreneurship:
- Business Plan | Business Model Canvas | Agile | Lean Startup
- Trends & Predictions | Market Research
- Product Management | Monetisation models
# Internship Project Details

<table>
<thead>
<tr>
<th><strong>Course Name</strong></th>
<th>Telematics Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Specialisation</strong></td>
<td>Automotive Software Security</td>
</tr>
<tr>
<td><strong>Course Provider</strong></td>
<td>iTelematics.org</td>
</tr>
<tr>
<td><strong>Product</strong></td>
<td>Wireless Vehicle Security</td>
</tr>
<tr>
<td><strong>Problem to solve</strong></td>
<td>[Contact <a href="mailto:info@iTelematics.com">info@iTelematics.com</a> for more details]</td>
</tr>
<tr>
<td><strong>Programming Language</strong></td>
<td>[Java] or [Swift] (Prerequisites)</td>
</tr>
<tr>
<td><strong>Platform</strong></td>
<td>[Android] or [iOS]</td>
</tr>
<tr>
<td><strong>Client and Server Technology</strong></td>
<td>[Google] or [Intel] or [Apple]</td>
</tr>
<tr>
<td><strong>Software Engineering Method</strong></td>
<td>Object Oriented Software Engineering</td>
</tr>
<tr>
<td><strong>Product Design</strong></td>
<td>Unified Modeling Language</td>
</tr>
<tr>
<td><strong>Development framework</strong></td>
<td>Agile Scrum / Google’s Design Sprint</td>
</tr>
<tr>
<td><strong>Realtime IoT Devices</strong></td>
<td>Wearables, smart phones (Emulators for development )</td>
</tr>
<tr>
<td><strong>To be Delivered</strong></td>
<td>Project Report, Presentation, working source code</td>
</tr>
<tr>
<td><strong>Training and Evaluation Method</strong></td>
<td>Online support using Skype call (Online Training) / Email Support</td>
</tr>
<tr>
<td><strong>Project Guide/Mentors</strong></td>
<td>One Professor from your college &amp; One Telematics Expert / Architect</td>
</tr>
<tr>
<td><strong>Internship duration (Basics)</strong></td>
<td>2 Months (40 days * 7.5 hours = 300 hours) per student at College</td>
</tr>
<tr>
<td><strong>Internship duration (Advanced)</strong></td>
<td>6 Months * 4 semester = 2 Years = 1200 hours (2 Hours/Day) at College</td>
</tr>
<tr>
<td><strong>Stipend</strong></td>
<td>No stipend</td>
</tr>
<tr>
<td><strong>Course Fees</strong></td>
<td>Contact <a href="mailto:info@iTelematics.com">info@iTelematics.com</a> for more details</td>
</tr>
<tr>
<td><strong>Certification / Experience Letter</strong></td>
<td>Provided on successful completion of the project</td>
</tr>
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</table>
## Internship - Topics Covered

<table>
<thead>
<tr>
<th>S.No</th>
<th>Topics covered</th>
<th>Descriptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
<td>Product Introduction and Software Engineering Concepts</td>
</tr>
<tr>
<td>2</td>
<td>Android/iOS Development (Client)</td>
<td>How to develop Mobile Telematics application for Internet of Things</td>
</tr>
<tr>
<td>3</td>
<td>Google Technology (Server)</td>
<td>Server development, Google Developer Portal and Playground</td>
</tr>
<tr>
<td>4</td>
<td>Research Domain</td>
<td>Internet of Things - Telematics Engineering</td>
</tr>
<tr>
<td>5</td>
<td>Development Framework</td>
<td>Agile Scrum / Google’s Design Sprint</td>
</tr>
<tr>
<td>6</td>
<td>Project Definition</td>
<td>Problem statements, goals, boundaries, timelines etc</td>
</tr>
<tr>
<td>7</td>
<td>Information Gathering</td>
<td>Requirement Analysis, Interviews ... etc</td>
</tr>
<tr>
<td>8</td>
<td>Unified Modeling Language</td>
<td>Usecases, Class, Object, Sequence, Activity diagrams ... etc</td>
</tr>
<tr>
<td>9</td>
<td>Object Oriented Analysis</td>
<td>Learn and Apply Object Oriented Analysis concepts</td>
</tr>
<tr>
<td>10</td>
<td>Object Oriented Design</td>
<td>Learn and Apply Object Oriented Design concepts</td>
</tr>
<tr>
<td>11</td>
<td>Database Design</td>
<td>Designing database - SQLite, Big Data, Cloud storage etc</td>
</tr>
<tr>
<td>12</td>
<td>Design Patterns</td>
<td>Learn algorithm, data structure, design patterns</td>
</tr>
<tr>
<td>13</td>
<td>Wireframe / UI Design</td>
<td>User experience design, wireframes, CXD, Personas</td>
</tr>
<tr>
<td>14</td>
<td>Prototype Evaluation</td>
<td>Proof of concept - Design &amp; Implementation of prototype</td>
</tr>
<tr>
<td>15</td>
<td>Server side development</td>
<td>Server side development</td>
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<tr>
<td>16</td>
<td>Client side development</td>
<td>Client side development</td>
</tr>
<tr>
<td>17</td>
<td>Code Review and Dev Testing</td>
<td>Unit testing, Static analysis, Automation tools, Memory leaks</td>
</tr>
<tr>
<td>18</td>
<td>Quality Assurance</td>
<td>Integration Testing, Product testing, Performance testing</td>
</tr>
<tr>
<td>19</td>
<td>Application Release</td>
<td>How to submit the app to Google Play / Apple’s AppStore</td>
</tr>
<tr>
<td>20</td>
<td>Project submission</td>
<td>Submit the open source code, presentation and project report</td>
</tr>
</tbody>
</table>
Evaluation Criteria  (Option - Traditional)

- Hackathon
- Mini Projects
- Group discussion
- Tech Talk | Paper Presentation
- Technical Quiz | Interview Questions
Evaluation Criteria - Part 1

- Team work & Collaboration
- Learning & Unlearning
- Quality of the work done
- Self Discipline & Self Motivation
- Specialisation in one area
Evaluation Criteria - Part 2

- Time Management
- The ability to identify the problem
- The ability to solve the problem
- The ability to deal with failures
- Leadership & Start-up skills
Course Completion Certificate

- Awarded after successful completion of each course.
  - Course Completion Certificate
  - Grade | Score card : After evaluation
    ✓ A : 81% - 100%
    ✓ B : 71% - 80%
    ✓ C : 60% - 70%
Research Deliverables

Corporates | Organisations | Universities

Research Reports

Telematics Business Requirements

iTelematics®

Partners | Customers | Governments

Research Reports

Trends & Predictions

Presentations

Papers | Journals

Thesis | Patents

Market Research

Prototype | POC

Analysis Report

Feasibility Reports

Security Design

Business Plan

Design Pattern

Monetisation Model

Contact us for more details : info@iTelematics.com

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Courtesy: http://more-sky.com/data/out/12/IMG_512872.jpg
# Pricing | Mentoring Fees

<table>
<thead>
<tr>
<th>Total Units</th>
<th>Plan / User</th>
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</thead>
<tbody>
<tr>
<td>Level - T1</td>
<td>$99/Unit</td>
</tr>
<tr>
<td>Level - T2</td>
<td>$199/Unit</td>
</tr>
<tr>
<td>Level - T3</td>
<td>$299/Unit</td>
</tr>
<tr>
<td>Level - T4</td>
<td>$399/Unit</td>
</tr>
<tr>
<td>Level - T5</td>
<td>Contact us</td>
</tr>
</tbody>
</table>

**T1 + Internship**  
2 to 24 months at college campus  
**Start-up @ College**  
$99/Month

Research Papers | Patents | PoCs  
Contact us  
info@iTelematics.com
ASHWINI SUDARSHANA

- Co-founder, iTelematics Software Private Limited
- Research - Intelligent Transportation Systems
- iOS and Android app development for Internet of Things
- Working in planning and designing smart cities, smart transportation and vehicle telematics solutions

- Profile: https://www.linkedin.com/in/ashwinisudarshana

info@iTelematics.com
“Dreams are not what you see in sleep. Dreams are which does not let you sleep.”

- A.P.J. Abdul Kalam