

# James Barnes

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EXPERIENCE	<b>Software Engineering Specialist</b> , Telstra 2023 – <i>present</i> <ul style="list-style-type: none"><li>• Developed a novel, declarative, end-to-end, test-automation framework for a large CRM system,</li><li>• Refactored existing test-automation system and associated APIs for ease of development,</li><li>• Translated business requirements into new products and orchestration plans on a large CRM system,</li><li>• Developed billing- and orchestration-related Java Spring Boot APIs</li></ul> <b>Software Engineering Intern</b> , Telstra <i>Summer 2020 – 2021</i> <ul style="list-style-type: none"><li>• Developed new features for the MyTelstra apps,</li><li>• DevOps responsibilities relating to the MyTelstra apps, including deployments,</li><li>• Created quality assurance tests for the MyTelstra app (Android, iOS, web)</li></ul> <b>Head Academic Tutor</b> , The University of Melbourne 2022 <ul style="list-style-type: none"><li>• Created assignment, tutorial, and exam material on theoretical computer science,</li><li>• Assisted in the delivery of course materials in a lecture format</li></ul> <b>Academic Tutor &amp; Demonstrator</b> , The University of Melbourne 2019 – <i>present</i> <ul style="list-style-type: none"><li>• Tutored content on introductory programming (Python), declarative programming (Haskell, Prolog), and theoretical computer science (DFAs, NFAs, regex, parsing, Turing machines, computability),</li><li>• Delivered tutorial content to postgraduate, first-year &amp; final-year undergraduate students,</li><li>• Graded assignments, projects, and exams of over 1500 students,</li><li>• Developed build tools to automate the creation of teaching materials</li></ul> <b>Data Analyst</b> , WorkSafe Victoria <i>Summer 2019 – 2020</i> <ul style="list-style-type: none"><li>• Developed automated tools to scrape, clean, and validate confidential and public company records</li></ul>
TECHNICAL SKILLS	Java (Maven, Spring, Spring Boot), JavaScript (Node.js), TypeScript, Python (Pytorch, Numpy), C, C++, Haskell, Prolog, Git (GitHub, GitLab), Bamboo, Postman, Cucumber (Gherkin), agile methodologies (JIRA), Salesforce (Apex, Vlocity)
EDUCATION	<b>Master of Computer Science</b> , The University of Melbourne 2020 – 2022 <ul style="list-style-type: none"><li>• <b>Grade:</b> First Class Honours (87.800 WAM)</li><li>• <b>Thesis:</b> Higher-Order Programming in Wybe (<a href="#">link</a>)</li><li>• Developed a higher-order extension to an existing language, Wybe</li><li>• Formalised the Wybe type system</li><li>• Benchmarked the performance of the language extension against the existing language, showing negligible performance overhead</li></ul> <b>Bachelor of Science</b> , The University of Melbourne 2017 – 2019 <ul style="list-style-type: none"><li>• <b>Grade:</b> First Class Honours (83.000 WAM)</li><li>• <b>Major:</b> Computing and Software Systems</li><li>• Created a web-based family heirloom register, allowing for users to upload and share their family heirlooms with other users</li><li>• Produced formal design documentation</li></ul>
AWARDS	<b>UniHack'21 First Place</b> , Scalr.io ( <a href="#">link</a> ) 2021 <ul style="list-style-type: none"><li>• First-prize winning UniHack'21 submission built with a team of five in 48 hours,</li><li>• Created a low-code platform for users to upload existing machine learning models, automatically creating REST endpoints that serve as an interface to said models,</li><li>• Scalable infrastructure that expands with users' requirements</li><li>• Simple web-based UI</li></ul>
LANGUAGES	English ( <i>native</i> ), Mandarin Chinese ( <i>basic</i> ), Indonesian ( <i>basic</i> )
VOLUNTEERING	<b>Student Representative:</b> Master of Computer Science 2022 <b>Student Representative:</b> Distributed Algorithms & Advanced Theoretical Computer Science 2020 – 2021