Project One

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The field of Computer Science (CS) manages to impact an innumerable amount of disciplines along the spectrum of Arts and Sciences. Despite making up only 8.1% of degree recipients in 2012("Table 318.20" 2015), the field of computer science has made an indelible mark on almost every other field imaginable. Across so many disparate applications of CS, developers need a method of communication that allows for growth of the field that binds them. Thankfully, the proliferation of home computers and the internet has only strengthened the bond that the CS community shares today. Many tools of communication exist already, and more are being produced every day. One tool can spawn a multiplicity of communities, each wholly distinct from the next. Another tool can be used as more of a soapbox where declarations of principle and value are archived for public viewing. Targeted discussion is the ultimate goal, and many communities require strict moderation to ensure that a culture of positive discourse can be achieved. Academic Journals serve as a repository of growth made in pushing the boundaries of the CS field, and many aspects of Theoretical Computation resemble those of Mathematics, both of which are intertwined. Growth in the field of CS(McPherson 2015) can be demonstrated by the level of communication and discourse which its members have the ability to cultivate.

With the immense variety of communication tools, an aspiring member of discourse must have the wherewithal to probe for and discover new communities. More often than not, communities reference one another and support a sort of cross pollination between groups. Where some communities encourage the sharing of personal information among a real-world friend group, others encourage pseudonymity or even total anonymity. The type of content that can be shared on one tool can fundamentally affect the type of community that arises. Linksharing sites are built on the foundation of connecting users to the panoply of nodes that comprise the internet. The content of a linksharing site is discovery in new corners of the web. Hacker News("Hacker News" 2015), one of the most potent examples of linksharing, proves itself to be valuable to CS professionals of many kinds. Run by the startup incubator Y Combinator("Y Combinator" 2015), its name a reference to a fundamental element in Theoretical Computation, Hacker News boasts a vibrant society of startup founders, engineers, students, and computing enthusiasts. Content submitted for public approval is evaluated, and the power to collectively support or reject content allows users to play a role in the curation

of content which represents the interests of the group as a whole. This democratization of sharing allows the most relevant and useful information to rise while noisy or frivolous information languishes.

With so many means of online communication, academic journal articles serve as a sharp contrast in terms of barrier to entry. While contribution to discourse online is, relatively, effortless, the barrage of rules, guidelines, and peer reviews prevent all but the most motivated CS students and academics from article submission. A frequent reader of academic journals likened good articles to, "a compelling story", that avoid, "trying to cover too many unrelated topics or ideas."(Crotty 2015) As a well written novel might have a central theme and follow a narrative structure, so too are journal articles more intriguing when the focus on subject matter is tight and the writing has a formal structure. Another journal reader described how important it is to, "convince readers in the beginning that your work is important and worth reading, otherwise they will quickly become disinterested and stop reading."(Galakatos 2015) The high amount of effort required to produce an accepted journal article ensures that the level of quality and thought put into the subject matter is worthy of pursuit by a potential reader. The journal ACM Transactions on Software Engineering and Methodology seeks to publish, "papers on all aspects of designing and building large, complex software systems: specification, design, development and maintenance", ("ACM Transactions on Software Engineering and Methodology" 2015) and has been doing so since 1992. One sample article from this journal "Automatic Workarounds: Exploiting the Intrinsic Redundancy of Web Applications", elaborates on a method of creating web applications that are robust and sturdy through the utilization of principles inherent to the domain of web development. This ACM journal can take a relatively broad scope of subject matter and deliver it to its audience. Journals can also be incredibly nuanced and tailored to a specific application of CS, one such example being the MIT Press Computer Music journal. Founded in 1977, the Computer Music Journal prides itself on being an, "essential resource for musicians, composers, scientists, engineers, computer enthusiasts and anyone exploring the wonders of computer-generated sound".("Computer Music Journal" 2015) This tight focus on electro-musical subject matter allows the Computer Music Journal to provide robust and fascinating developments in a subset of CS that may not often be popular. One article entitled "Buttons, Handles, and Keys: Advances in Continuous-Control Keyboard Instruments" describes an augmentation to digital keyboards where a touch sensitive overlay is placed over each key, allowing for controls over any arbitrary parameter, for instance pitch bend, volume, or resonance(McPherson 2015). In this article, the author provides historical context, implementation details, and additional applications of this technology, each a hallmark of academic papers. In order to submit this paper to the(Crotty 2015) MIT Press for evaluation, the author had to follow a strict set of guidelines not limited to a 45 page style and spelling guide, Chicago citation styling, and anonymous submission.

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