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CSE300.01: Proposal Summary

Just Crowdsource It!
Professionalizing Software Engineering

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Just Crowdfund It! Professionalizing Software Engineering

The discipline of software engineering has matured to a point where it is necessary for practitioners to establish a set of professional standards. The goal of this proposal is to create an open source platform that enables existing software engineers, from the high school student to the career programmer, to elect and direct a representative governing body for the creation and amendment of professional certification guidelines for, by, and of software engineering professionals. This body will ultimately establish a set of moral, professional, and educational standards essential for practitioners in the field (Moore 1970, 3-4).

During the last half-century, the artifacts of software engineering have been embedded in the furthest reaches of human activity. From the financial, industrial, military, medical, and educational sectors, to name a few, computer programmers are relied on to create products that improve productivity, precision, and correctness in nearly every enterprise. Yet despite its importance, the initial consideration for software engineering as a profession didn't gain traction until 1993, when the International Institute for Electrical and Electronics Engineers (IEEE) and the Association for Computing Machinery (ACM) formed the Joint Steering Committee for the Establishment of Software Engineering as a Profession (JSCSEEP). Since then numerous committees have tried and failed to codify professional standards (Cupp 2001, 135). While society at large currently enjoys increasingly democratized *access* to knowledge, it has stopped short of democratizing to the point of putting public representatives in direct alignment with their constituencies. The time has come for software engineers themselves to self-organize, to democratically assemble themselves into a nationally recognized profession with a sanctioned set of principles. By building the proposed platform, and not relying on the proceedings of a non-democratic body, progress may finally be made.

In keeping with the spirit of well-entrenched software engineering practices, the web-based platform proposed will be built and maintained with open source standards. It will be subject to open security analysis and transparent fairness reviews. The initial contributors to this platform will self-select, as it is a traditional open source project to which any capable member of the public may contribute. The platform will allow members to suggest proposals in any of the areas voted on by the governing body, with the expectation that the body will vote according to the expressed will of its constituents. Further, the choices in the platform implementation will determine initial voting practices and frequencies, governing body members' term lengths and limits, constituent vote values, and methods of protecting minorities.

Similar efforts to put the power of direct democracy into the hands of the technically literate have been encumbered by the observation that not all members of the represented have access to technology; the resulting democracy would be for, of, and by the technically literate (Cole 2015, 9). This proposed effort does not suffer from those same limitations: the members of this professional guild will be the very architects and implementers of technical systems. Other objections to direct democracies include their inability to act effectively, hampered by inefficient and

potentially contradictory public referendums. The bylaws established by this platform would itself be decided by the constituents, subject to revision and interpretation by their elected governing body.

The ultimate goal is to allow software engineers to provide the greater public with higher quality software in a more transparent manner, with greater emphasis on doing the right thing (McCalla 2002, 100). In service of this, the goal of this platform is to establish a self-governing, professional guild of software engineering professionals, complete with a self-determined code of ethics and thoroughly defined educational standards.

Other professional, accrediting organizations have proven effective at raising standards for the profession as a whole (Cupp, 2001, 132). It is time for software engineers to build the tool that will allow them to enter this new phase of its development, one more transparent, accountable, ethical, and enlightened.

Bibliography

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